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MARCH 1944

Monthly LABOR Review

VOL. 58 • NO. 3

In this Issue . . . Spendable earnings of factory workers . .
Prices of building materials in two wars
Returning soldiers to civil life, 1918–19

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

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MONTHLY LABOR REVIEW

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

+ HUGH S. HANNA, EDITOR +

MARCH 1944, Vol. 58, No. 3

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This Issue in Brief

Spendable earnings of factory workers, 1941–43.

Between January 1941 and October 1943 the average weekly earnings of factory workers rose from $26.64 to $44.86, or by 68.4 percent. In the case of a worker supporting a family of four, deductions (taxes and war bonds) increased from 27 cents to $6.67. Taking into account the cost of living, in October 1943 such a worker had an average of $5.65 per week above the amount necessary to maintain him and his family at their January 1941 level of living. For the single worker, without dependents (and therefore without the credits allowed for them in income-tax calculations), deductions from earnings averaged $12.11 per week, leaving him with an average of only 22 cents per week above the amount needed to maintain his January 1941 standard of living. Page 477.

International Labor Conference of 1944.

The International Labor Conference, which will convene in Philadelphia on April 20, 1944, will consider five important subjects: The future of the I. L. O. Recommendations to the United Nations on present and post-war social policy, Organization of employment in the transition from war to peace, Problems in social security arising out of the war, and Minimum standards of social policy in dependent territories. A discussion of the problems involved in each of these subjects is given in the article on page 490.

Plans for returning soldiers to civil life.

Plans to return the soldiers and war workers to peacetime activities are next in importance to the winning of the war. Many of the mistakes in this respect that were made at the end of the first World War could have been avoided with better and more leisurely planning. For this reason the article on page 500 reviews the plans for demobilization that were brought forward at that time, with the thought that they may be helpful at the end of this war.

Productivity in agriculture.

In 1942 the volume of agricultural production reached the highest point on record—16 percent over 1939. This output was achieved with a labor force 3 percent smaller than in 1939. Output per worker in 1942 was 20 percent greater than in the earlier year. Part of the rise in productivity was due to higher crop yields and better farm practices; longer hours of work were also a factor. Page 514.

Causes of crane accidents in shipyards.

Crane accidents which caused nearly 5 percent of all injuries in shipyards in the first 7 months of 1943, caused a greater-than-average proportion of severe accidents. Whereas serious injuries formed 16 percent of all shipyard injuries, 38 percent of the crane accidents were of this type. The large proportion of preventable accidents caused by cranes and other lifting devices indicates the advisability of greater emphasis on preventive and safety work. Page 531.

New dwelling units in nonfarm areas, 1942 and 1943.

The 350,900 new nonfarm dwelling units on which construction was started during 1943 were a third less than the 496,600 new units started during 1942. Private builders provided 184,000 units, or slightly over half of the 1943 total, while publicly financed war housing projects will contain 167,000 units, mostly in temporary-type structures. Page 536.

Earnings in aircraft-engine plants.

Factory workers in selected key occupations in aircraft-engine plants had straight-time earnings averaging $1.158 per hour in August 1943; those of office workers averaged 72.3 cents. Page 579.

Wages in the mining and milling of fluorspar.

In September 1943, the average straight-time hourly earnings of workers in key occupations in fluorspar mines and mills ranged from 54.8 to 96.3 cents. In general, mine workers were paid more than mill workers. Page 588.

Wage rates of building-service workers.

Among building-service employees the highest-paid occupation found in a survey by the Bureau of Labor Statistics covering 42 cities was that of class A stationary engineers. The median hourly rate for this occupation was 96 cents. Women working as elevator operators were the lowest-paid class, receiving 42 cents per hour. Page 594.

Union wages and hours in the baking industry.

The hourly wage rates in effect under union agreements for bakery workers in 65 cities on July 1, 1943, averaged 84.7 cents. Workers in Hebrew baking plants had the highest average rate, $1.404, and those in the pie and pastry branch the lowest, 65.5 cents. Page 601.

Changes in railroad wages, 1943–44.

The prolonged railroad wage disputes which were adjusted in January 1944 involved negotiations between the parties and action by the National Mediation Board and Emergency Boards, by the Office of Economic Stabilization, and finally by the President. The wage adjustments ranged from 9 to 11 cents per hour, part of the increases being in lieu of claims for adjustments of overtime rates. The Emergency Board in the dispute of the nonoperating employees and a similar board for the operating employees made extensive surveys of the railroad wage structure and of the comparative changes in railroad and nonrailroad wages. Page 611.

Effect of the war on import prices.

Certain shipping costs began to increase even before actual hostilities occurred in September 1939 and continued through the remainder of the year. These higher costs forced up the price level of imported commodities. Prices of domestic goods also increased but by no means at so precipitous a rate. Increases in import prices varied up to 3 or 4 times as much as those in domestic commodities. An analysis based upon the prices of 19 essential imported commodities, over the period July 1939 through June 1940, is given on page 650.

MONTHLY LABOR REVIEW

FOR MARCH 1944

Spendable Earnings of Factory Workers, 1941–43

By N. Arnold Tolles, *U. S. Bureau of Labor Statistics*

Summary

THE phrase "take-home wages" has been used very frequently to describe the averages of weekly earnings published by the Bureau of Labor Statistics. This popular description was never entirely accurate, because the published averages relate to gross weekly earnings before deductions have been made. Some workers always have been subject to deductions for such items as group insurance, occupational supplies, and union dues. The cash sum "taken home" was somewhat less than the gross weekly pay. Until recently, however, these deductions were small in aggregate amount and were seldom subject to violent change. The published averages of weekly earnings were therefore satisfactory as a measure of the trends of spendable income.

Two recent developments have depressed the level of currently spendable earnings: The widespread sale of war bonds, beginning in 1942, and the extension of personal taxes down to the income levels of wage earners, beginning in 1943. Thus, the comparison between the 68.4-percent rise in gross factory earnings and the 23.4-percent rise in the Bureau's cost-of-living index, since January 1941, is misleading. The appropriate comparison to show current levels of living would appear to be between living costs and spendable earnings.

The gross earnings of workers in the United States no longer represent their currently spendable income. For factory workers as a whole, the average of gross weekly earnings rose 68.4 percent between January 1941 and October 1943. The corresponding increase in the average of spendable income, after taxes and a 10-percent bond subscription, was 44.8 percent for a worker supporting a family of 4 and 24.2 percent for a worker without dependents. During the same period the cost of a standard budget rose by an average of 23.4 percent.

The worker who earned the average factory wage of $26.64 in January 1941 had $26.37 to spend on current living. By October 1943, price increases had raised the cost of this standard from $26.37 to $32.54. Average weekly earnings actually advanced to $44.86 by October 1943. However, out of this $44.86, the average factory worker with a family of four had a currently spendable income, as defined above, of $38.19, while the worker without dependents had a net of $32.76 per week. Thus, the net addition to spendable earnings over this period amounted to $5.65 per week in the case of the married

worker used as an example and to 22 cents per week in the case of a worker without dependents.

Among the various manufacturing industries, sharp differences are evident in the trends of both gross and spendable earnings. At one extreme, the worker in the newspaper and periodical industry experienced an average rise in gross earnings, even before bonds and taxes, of only 21.4 percent, or less than the rise in living costs. At the other extreme is the fertilizer industry where gross earnings rose by more than 80 percent and net spendable earnings rose by 62 and by 40 percent, respectively, for married and single workers. Shipyard workers experienced about the average percentage rise in gross earnings (66.9 percent) to the unusually high level of $62.91 per week in October 1943. However, a shipbuilding worker without dependents who earned the average gross amount per week was left with net spendable earnings in October 1943 of $44.70 or $1.34 less than the amount required to meet the current cost of the average living standard for such a worker in January 1941. A shipbuilding worker supporting a wife and two children would have spendable earnings of $50.58 under the same circumstances, or $4.54 more than the amount required to maintain his former plane of living.

The burdens of the war have been borne by nearly all factory workers, in the form either of a reduced scale of living or of harder work without material improvement in current living. Because most factory wage earners are working more intensely and for longer hours, they have been able to maintain their spendable earnings and to save. Any gains made in spendable earnings have been small, quite different from those implied by comparing the gross average of earnings with average living costs. Neither widespread deprivation nor widespread inflationary spending can be found among the factory population.

Subtractions From Gross Earnings

In January 1941, the basic period of the so-called "Little Steel" formula, the only Nation-wide deduction from gross weekly pay was the social-security tax of 1 percent. Certain workers had additional deductions for such items as union dues, tools and supplies, private group insurance, and unemployment-compensation taxes.

Early in 1942 everyone was urged to subscribe at least 10 percent of his gross earnings to war bonds. Workers throughout the country have responded very generally to this appeal and have arranged for voluntary deductions from their pay envelopes for this purpose. This part of the worker's gross earnings is not available for current spending. It is true that war bonds may be redeemed after they have been held for 60 days, but in fact the amount of cash obtained by such redemption is only a small fraction of the amount subscribed. Nearly three-quarters of the workers have arranged for regular pay-roll deductions for the purchase of war bonds and, by the end of 1943, these deductions averaged 9 percent of the gross pay of the participants. Bond deductions for industry as a whole amounted to about 7 percent of total pay rolls, including the pay of nonparticipants. In addition, many workers subscribed for war bonds directly.

No attempt is made in this article to adopt the average percentage of bond deductions as a basis for calculating spendable earnings. Rather, the calculations are made for the usual case of the worker who meets the quota of the pay-roll savings plan by subscribing 10 per-

cent of his gross earnings. The 10-percent net subscription is assumed for January 1943 and thereafter. Purely for purposes of illustration, a subscription of 5 percent was adopted for July 1942 and a subscription of 7½ percent for October 1942. Bond redemption may be ignored, since it has not occurred in the usual case.

The deduction of war-bond subscriptions from gross earnings entails no implication that the individual workers were faced with any loss for this reason or that the deductions were compulsory. The term "net spendable earnings," as here used refers to the cash a worker has to spend, regardless of any change in his capital position. To the extent that the factory worker responded to the war-bond drives as expected, his spendable earnings were correspondingly reduced.

Beginning in 1943 the mass of factory workers became liable for personal income taxes for the first time in the history of this country. Moreover, the approximate amount of this liability was deducted from the worker's pay check by the employer. During the first half of 1943 the income tax applicable to the mass of wage earners was the "victory tax," amounting to 5 percent of taxable income. Income exempted from the victory tax was limited to $624 per year or $12 per week. This exemption is the same for all persons. Since July 1943 a new income tax has been added to the victory tax. The sliding scale of rates under the new tax begins at 6 percent on the first $2,000 of taxable income.[1] Under the income tax a single person is allowed a personal exemption of $500 and an earned-income credit of 10 percent. These two personal income taxes reduced the spendable earnings of nearly all wage earners. The amount of tax liability depends, of course, on the number of dependents supported by the worker as well as on the level of his gross income. Hence, it would be somewhat unrealistic to speak of an average amount of income tax per wage earner. It has seemed preferable to compute the tax liability for two contrasting types of income-receivers: (1) A worker who is the sole support of an adult and two children and (2) a single person with no dependents. The tax computations provided are based on the final tax liability rather than the estimated amounts which have been withheld. It has been assumed that the worker had no tax liability in 1942 and, therefore, is not involved in the "forgiveness" feature of the current tax law. It is assumed further that all of the worker's income is obtained from earnings and that he has tax deductions amounting to 6 percent of gross earnings.

For wage-earning families as a whole, average spendable earnings have been raised since 1941, by the employment of additional family members and by the decline in single-worker families. These influences are necessarily excluded from the present inquiry into the spendable earnings of two constant family types. Neither the family of 4 nor the worker without dependents is presented as an average family unit.

Trends of Gross and Net Spendable Earnings

From January 1941 to October 1943, the average weekly earnings of factory workers rose by 68.4 percent—from $26.64 to $44.86. In the earlier period, nearly all of these gross weekly earnings were cur-

[1] The normal tax is 6 percent on all taxable income (after deductions, earned income credit, and personal exemptions). The surtax sliding scale begins with 13 percent on the first $2,000 of surtax net income (i. e., after deductions and personal exemptions). Since there is no earned income credit on the surtax, an individual might pay a surtax and no normal tax. In this case, the beginning rate would be 13 percent.

rently spendable. After deducting the social-security tax of 1 percent (27 cents), a sum of $26.37 remained. By October 1943 the social-security deduction, still at 1 percent, amounted to 45 cents. Income and victory taxes in the case of a worker with a wife and two children, who had average earnings of $44.86, amounted to $1.73 per week.[2] The worker who subscribed 10 percent to war bonds, as he was expected to do, would have a further deduction of $4.49. These three deductions totaled $6.67 per week and the remaining spendable earnings amounted to $38.19. Thus, although the average gross earnings rose by 68.4 percent, the average net spendable earnings for the worker supporting a family of four rose by only 44.8 percent. The corresponding increase in the prices of goods customarily purchased by workers in large cities was 23.4 percent during this whole period. Table 1 provides similar figures for nine selected months between January 1941 and October 1943. It will be seen that the most rapid advance in spendable earnings occurred during the year 1941, prior to the deductions for taxes and bonds. The results shown for the year 1942 should be understood as being approximate only, because of the factor of bond purchases. At any time during this period, the factory worker might have responded by subscribing the full 10 percent for bonds and if he did so he would have suffered a decline in his spendable earnings. On the other hand, his spendable earnings would have continued to rise with his gross earnings if he postponed his bond subscription. By 1943 the deduction of 10 percent for bonds corresponded with the common experience. Average spendable earnings moved very little above the levels of 1942 until the last quarter of 1943; whereas gross earnings rose by an average of $7.22 per week from January 1942 to January 1943, the net spendable earnings rose by only $2.14.

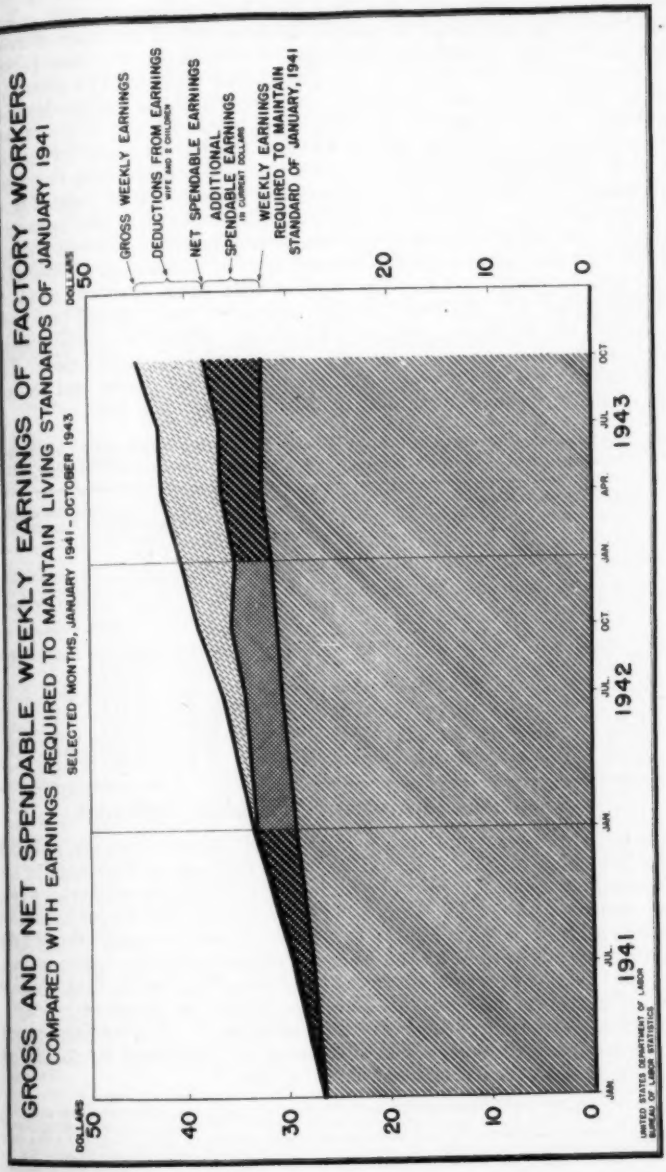
TABLE 1.—*Gross Earnings, Deductions, and Spendable Earnings of Factory Worker Supporting Adult and 2 Children, Compared With Cost of Living, January 1941–October 1943*

Period	Average gross weekly earnings		Deductions from earnings			Average net spendable earnings		Cost-of-living index (January 1941=100)
	Amount (in current dollars)	Index (January 1941=100)	Social-security tax	Income and victory taxes	Bond purchases [1]	Amount (in current dollars)	Index (January 1941=100)	
1941: January	$26.64	100.0	$0.27	.....	.....	$26.37	100.0	100.0
July	29.62	111.2	.30	.....	.....	29.32	111.2	104.1
1942: January	33.40	125.4	.33	.....	.....	33.07	125.4	111.1
July	36.43	136.7	.36	.....	$1.82	34.25	129.9	116.1
October	38.89	146.0	.39	.....	2.92	35.58	134.9	118.1
1943: January	40.62	152.5	.41	$0.94	4.06	35.21	133.5	118.7
April	42.48	159.5	.42	1.26	4.25	36.55	138.6	121.1
July	42.76	160.5	.43	1.34	4.28	36.71	139.2	122.9
October	44.86	168.4	.45	1.73	4.49	38.19	144.8	123.6

[1] Computed at 5 percent in July 1942, 7½ percent in October 1942, and 10 percent in January 1943 and thereafter.

In table 2 and the chart, the comparison between the movement of spendable earnings and cost of living is translated into familiar terms. Here again, the data cover the worker who supported an adult and two children. The gross weekly earnings, the deductions, and the net spendable earnings are identical with those shown in table 1.

[2] The average amount of tax actually paid by the workers will exceed the amounts indicated, since the lowest-paid workers will pay no income tax while the highest-paid will be liable for tax rates considerably above those applying to average earnings.


GROSS AND NET SPENDABLE WEEKLY EARNINGS OF FACTORY WORKERS
COMPARED WITH EARNINGS REQUIRED TO MAINTAIN LIVING STANDARDS OF JANUARY 1941
SELECTED MONTHS, JANUARY 1941 - OCTOBER 1943
DOLLARS
50
40
30
20
10
0
GROSS WEEKLY EARNINGS
DEDUCTIONS FROM EARNINGS
WITH 2 AND 3 CHILDREN
NET SPENDABLE EARNINGS
ADDITIONAL
SPENDABLE EARNINGS
IN CURRENT DOLLARS
WEEKLY EARNINGS
REQUIRED TO MAINTAIN
STANDARD OF JANUARY, 1941
JAN.
JUL.
1941
JAN.
JUL.
OCT.
1942
JAN.
APR.
JUL.
OCT.
1943
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

In place of a cost-of-living index, however, table 2 provides a computation of the earnings which a worker would have needed in each period to support his level of living as it was in January 1941. This computation results from a simple application of the cost-of-living index to the net spendable earnings of $26.37 in the base period. By October 1943, after the cost of living had risen by 23.4 percent, a worker needed to spend $32.54 in order to purchase the goods which could have been bought in January 1941 with $26.37. The average of net spendable earnings did rise faster than the cost of living, but the additional spending power of the factory worker was much less than has very frequently been supposed. While the average of gross earnings advanced by $18.22 (from $26.64 to $44.86), net spendable earnings left after deduction for taxes and bonds advanced by only $11.82. At the same time the money cost of a January 1941 level of living rose by $6.17. Thus, the worker with gross earnings of $44.86 had improved his position to the extent of only $5.65 per week. Moreover, the additional earnings which the worker was free to spend had, like all other income, a lower purchasing power than before. The $5.65 in October 1943 would command no more goods and services than could have been obtained by $4.58 in January 1941.

TABLE 2.—*Spendable Earnings of Factory Worker Supporting Adult and 2 Children, and Earnings Required to Maintain January 1941 Standard, January 1941–October 1943*

Period	Gross weekly earnings	Deductions from earnings	Net spendable earnings	Earnings required to maintain standards of January 1941	Addition to spendable earnings	
					In current dollars	In January 1941 dollars
1941: January	$26.64	$0.27	$26.37	$26.37	$0.00	$0.00
July	29.62	.30	29.32	27.56	1.76	1.66
1942: January	33.40	.33	33.07	29.30	3.77	3.39
July	36.43	2.18	34.25	30.62	3.63	3.21
October	38.89	3.31	35.58	31.14	4.44	3.79
1943: January	40.62	5.41	35.21	31.56	3.65	3.16
April	42.48	5.93	36.55	32.46	4.09	3.52
July	42.76	6.05	36.71	32.41	4.30	3.73
October	44.86	6.67	38.19	32.54	5.65	4.88

Spendable Earnings in Individual Industries

The general average of the earnings of all factory workers, although useful for some purposes, is too abstract to have much meaning for individual workers. It would be difficult to find an actual worker whose gross earnings advanced from $26.64 to $44.86 and whose spendable earnings advanced from $26.37 to $38.19. Such a worker would have had to take advantage of the average opportunity for improvement, not only from wage-rate increases and overtime work, but possibly also by changing his job, his employer, and his place of residence. The actual experiences of individual workers in the wartime period have been very diverse. This diversity is illustrated by the figures of gross and net earnings shown in table 3.[3]

[3] As noted previously, all the results shown are for workers who did devote 10 percent of their pay to war bond purchases. In some, but not all, of the industries with the least favorable trends of spendable earnings, actual pay-roll deductions for bonds were less than the general average. Thus, as compared with average deductions of 9 percent of the participants' pay rolls, the recent percentages for the newspaper, rayon, machine-tool, and the baking industries have been 7, 9, 10, and 8, respectively. Against a general ratio of 7 percent of all pay rolls, including nonparticipants, these industry percentages were 3½, 6, 8, and 5. In the extreme case of newspapers, a 3½-percent bond subscription would leave a 12- rather than 4-percent rise in spendable earnings for the married worker and a 3- rather than 10-percent decline for the single worker (January 1941 to October 1943; compare columns 7 and 8 of table 3).

SPENDABLE EARNINGS OF WORKERS WITH DEPENDENTS

The gross earnings of workers in the newspaper and periodical industry increased by only 21.4 percent from January 1941 to October 1943; those in the baking industry increased by 37.7 percent; those in steel mills by 57.4 percent; and those in the fertilizer industry by 83.7 percent (table 3, column 6). Even greater diversity appears in the movement of net spendable earnings. Here, as has been seen, the average result in the case of a worker with a family of four is a 44.8-percent increase. A similar worker in the newspaper industry had no significant increase in net spendable earnings, whereas the average increase in the fertilizer industry was 62.2 percent. Increases of 30 to 40 percent were typical of such large industries as hosiery, meat packing, steel, cotton manufacturing, automobiles, and shipbuilding.

TABLE 3.—*Changes in Gross and Net Spendable Earnings of Factory Worker Supporting Adult and 2 Children and of Single Worker Without Dependents, by Industries*

Industry	Gross weekly earnings		Net spendable earnings			Percent of change, January 1941 to October 1943 in—			Employment December 1941 (in thousands)
				October 1943		Gross earnings	Net spendable earnings		
	January 1941	October 1943	January 1941	Family of 4	Single worker		Family of 4	Single worker	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All manufacturing	$26.64	$44.86	$26.37	$38.19	$32.76	68.4	44.8	24.2	13,870
Durable goods	30.48	51.26	30.18	42.68	37.25	68.2	41.4	23.4	8,397
Nondurable goods	22.75	35.18	22.52	30.66	26.15	54.6	36.1	16.1	5,473
Selected manufacturing industries [1]									
Newspapers	38.18	46.33	37.77	39.21	33.75	21.4	3.8	−10.5	113
Rayon and allied products	27.40	37.22	27.13	32.42	27.57	35.8	19.5	1.6	53
Machine tools	40.15	55.34	39.75	45.41	39.72	37.8	14.2	−.1	92
Baking	26.46	36.43	26.20	31.74	27.06	37.7	21.1	3.3	263
Boots and shoes	19.58	28.33	19.38	24.75	21.56	44.7	27.7	11.2	176
Electrical equipment	33.18	48.75	32.85	40.88	35.40	46.9	24.4	7.8	(2)
Paints	29.86	44.17	29.56	37.68	32.32	47.9	27.5	9.3	30
Paper boxes	22.26	33.00	22.04	28.74	24.68	48.0	30.4	12.0	86
Carpets and rugs	25.18	37.61	24.93	32.75	27.83	49.4	31.4	11.6	21
Hosiery	18.51	27.99	18.32	24.48	21.29	51.3	33.6	16.2	113
Chemicals, not elsewhere classified [3]	33.10	50.34	32.77	42.00	36.50	52.1	28.2	11.4	121
Meat packing	26.84	41.94	26.57	36.16	30.76	56.3	36.1	15.8	171
Woolen textiles	21.78	34.24	21.56	29.85	25.53	57.2	38.5	18.4	160
Blast furnaces, steel works	33.60	52.88	33.26	43.68	38.20	57.4	31.3	14.9	503
Cotton textiles	15.60	24.57	15.44	21.52	18.94	57.5	39.4	22.7	473
Automobiles	37.69	59.50	37.31	48.32	42.48	57.9	29.5	13.9	762
Castings, gray iron	30.45	49.50	30.15	41.38	35.96	62.6	37.2	19.3	78
Shirts, etc., men's	14.22	23.01	14.08	20.17	17.95	61.8	43.3	27.5	56
Planing and plywood	22.51	36.87	22.28	32.04	27.26	63.4	43.8	22.4	79
Shipbuilding	37.69	62.91	37.31	50.58	44.70	66.9	35.6	19.8	(2)
Cars	29.57	49.92	29.27	41.64	36.22	68.8	42.3	23.7	(2)
Women's clothing, not elsewhere classified [4]	19.47	32.91	19.28	28.69	24.62	69.0	48.8	27.7	230
Underwear	14.85	25.44	14.70	22.26	19.60	71.3	51.4	33.3	13
Agricultural machinery	29.92	51.91	29.62	43.00	37.47	73.5	45.2	26.5	43
Castings, malleable	28.42	50.04	28.14	41.87	36.33	76.1	48.8	29.1	26
Typewriters	26.40	48.14	26.14	40.42	34.95	82.3	54.6	33.7	13
Locomotives	34.79	63.51	34.44	51.02	44.44	82.6	48.1	29.0	(2)
Fertilizers	[5] 15.71	28.86	[5] 15.55	25.22	21.85	83.7	62.2	40.5	22

[1] In ascending order of percent of increase in gross weekly earnings (column 6).
[2] Not available for publication.
[3] Excludes paints, drugs, perfumes, soap, rayon, gases, cottonseed oil, and fertilizers.
[4] Excludes corsets and millinery.
[5] October 1940 substituted for January 1941, to avoid seasonal distortion.

As might be expected, industries showing the greatest increases in gross earnings tended also to show the larger increases in net spendable earnings. This relationship is not uniform, however, because of the operation of the income tax. Since income-tax rates are on a sliding scale, the amount of tax liability varies sharply with the level of income. Thus, the shipbuilding industry, where gross earnings rose by 67 percent, yielded an increase of only 36 percent in net spendable earnings per week. The explanation lies in the relatively high absolute level of gross earnings at the end of the period. The married worker in shipbuilding with average gross weekly earnings of $62.91 was liable for income taxes of $5.41 a week; the cotton-textile worker, on the other hand, with gross earnings of $24.57, had a tax liability of only 60 cents per week. This factor explains the relatively favorable movement of spendable earnings in the lower-wage industries such as shoes, paper boxes, carpets, hosiery, woolens, shirts, women's clothing, underwear, and fertilizer.

SPENDABLE EARNINGS OF WORKERS WITHOUT DEPENDENTS

For the wage earner without dependents, the income-tax liability at any given level of income is considerably greater and the current levels of spendable earnings consequently are smaller than those of a worker supporting a family of four. At the factory average of gross earnings in October 1943 of $44.86 per week, the worker without dependents is liable for $7.17 in taxes while the worker supporting a wife and 2 children pays only $1.73. This contrast in tax liability has a decisive effect on the net spendable earnings. Out of the factory average wage of $44.86 in October 1943, workers without dependents had only $32.76, after deducting for bonds and taxes, whereas the head of a family of 4 had $38.19 (table 3).

During the period since January 1941 the net spendable earnings of single workers who earned the average factory wage advanced by 24.2 percent, or just about as much as the rise in living costs.[4]

Among the 5½ million workers in the nondurable-goods industries, average net spendable income rose less than 18 percent; on the average, these workers could not maintain their levels of living at their January 1941 standards while devoting as much as 10 percent of their gross earnings to war-bond purchases. A number of well-known factors account for the relatively poor showing of the nondurable-goods industries. In wartime the pressure of demand for labor is much less severe in the nondurable- than in the durable-goods industries. Consequently, the hours of work are not extended so rapidly and wage rates are not raised to the same extent for the purpose of attracting labor. A fact that is, at first glance, more puzzling is that the advance of net spendable earnings for both the durable- and the nondurable-goods industries (23 and 18 percent) was less than the advance that occurred for manufacturing as a whole (24 percent). The explanation lies in the shift of employment toward the higher-wage, durable-goods industries. Factory workers taken altogether have gained more than the average of their gains in the separate industries, simply because a larger proportion than before are at work in the industries with the higher wage levels. The industries shown

[4] The official cost-of-living index which shows a rise of 23.4 percent during this period applies to family living rather than to the cost for single individuals. No adequate information is available as to the prices of room, board, and restaurant items that are important in the budgets of single persons.

in table 3 are well distributed through the field of manufacturing, yet only 8 of these 28 industries provided a rise of net spendable earnings as great as the average rise of 24.2 percent.

For single workers, even more than for those with dependents, the changes in net spendable earnings have shown great diversity. In the newspaper and periodical industry single workers who bought their quota of bonds suffered an absolute loss of 10.5 percent (column 8) while in the fertilizer industry they gained 40.5 percent. The absolute level of weekly earnings has more influence on the tax liability of single workers than of workers with dependents because the single worker lacks the benefit of the dependents' exemptions. Not only is a large portion of his earnings subject to tax but the larger taxable income may subject him to a higher tax rate. A comparison of the woolen- and the cotton-goods industries illustrates the effect of the earnings average on the tax and hence on the trend of spendable earnings. In both of these industries gross weekly earnings rose by 57 percent. For workers with 3 dependents the changes in spendable income were also very similar, showing increases of between 38 and 40 percent. However, the average gross wage in woolen mills was $34.24 in October 1943, as compared with an average of $24.57 in cotton mills. For a single worker the income and victory tax on $34.24 per week is about $5; on $24.57 it is about $3. As a result, the average spendable income of the higher-wage woolen workers who were single advanced by only 18.4 percent while the corresponding advance in cotton mills was 22.7 percent.

The position of workers without dependents in machine-tool plants deserves special comment. The machine-tool industry was among the first to be affected acutely by the national defense program of 1940. The $40.15 average gross weekly earnings in January 1941, 51 percent above the general factory average at that time, reflected the lengthening of hours that had already occurred, as well as the relatively high average rates of the highly skilled workers in this industry. By October 1943 the machine-tool industry had already reduced working schedules, as the tooling of war factories approached completion. Reduction of working schedules lowered the average weekly earnings, not only because fewer hours were paid for but also because a smaller proportion were paid for at premium rates for overtime. Meanwhile the wartime scale of operations had made possible, and the shortage of skilled workers had made imperative, the use of a larger proportion of routine workers. In spite of wage-rate increases, gross weekly earnings in October 1943 averaged $55.34, only 37.8 percent above those in January 1941. Nevertheless, although gross earnings had shown a net increase much less than the average, they were high enough to make the machine-tool workers subject to relatively heavy income taxes; single workers at the average wage of October 1943 were liable for $10.08 per week. Consequently, the spendable income of single workers in October 1943 was, on the average, no more than sufficient to meet the increased cost of the 1941 level of living.

Spendable Earnings, by Industry, Compared With Living Costs

WORKERS WITH DEPENDENTS

A married worker with two children could maintain his pre-war scale of living, pay taxes, and meet his bond quota if he had an increase in gross earnings of 40 to 50 percent between January and October

1943. The actual increases that occurred in gross earnings exceeded 50 percent in industries which employ the majority of factory workers; the average increase was 68.0 percent. Consequently most married factory workers could buy more goods in October 1943 than in January 1941. The average net spendable earnings of a worker with three dependents, after bonds and taxes, exceeded the cost of a January 1941 standard by $5.65 per week. This outcome of the war is remarkable. Prior to the attack on Pearl Harbor no prospect existed for even maintaining the living standards of the mass of the workers in the event of a major war. In the case of most factory workers this has been done, and more, as a result of more intensive work for longer hours by a larger labor force.

About one-third of the factory workers are employed in industries which have provided net gains of $4.50 or more per week in the spendable earnings of married workers who earned close to the average wage of these industries. Particularly in the war industries, the married workers have enjoyed substantial gains in spendable earnings, thus achieving a real surplus over their former cost of living even after meeting bond and tax obligations. In general, the married workers who received as much as a 65-percent increase in gross earnings from January 1941 to October 1943 retained a weekly $5 surplus of spendable earnings after bonds and taxes. Gains of this kind occurred in the shipbuilding, car-building, agricultural-machinery, malleable castings, typewriter, and locomotive industries. All of these industries were converted to war production. Most favorably situated were the married workers in the locomotive industry, where gross earnings rose by 83 percent—from $34.79 to $63.51 (table 3). The average spendable income in this industry was $34.44 in January 1941 and to meet this scale of living in October 1943 the worker needed $42.50 (table 4). Actually the average spendable earnings of married workers in this industry rose to $51.02, even after taxes of $6.14 and bond purchases of $6.35 per week. The addition to net spendable earnings of the worker with three dependents averaged $8.52 per week.

The average net gain in shipbuilding, while smaller than in the locomotive industry, amounted to $4.54 per week. Gross earnings rose by an average of 67 percent to a level of $62.91 in October 1943. The cost of a 1941 scale of living was $46.04 in October 1943. Net spendable earnings exceeded this cost by $4.54, after taxes of $6.04 and a bond subscription of $6.29.

In a few of the nonwar industries the married workers scored gains in spendable income comparable to those just cited. Women's clothing was the most important of the industries showing sizable gains, although not directly involved in war production. As compared with the war industries, the women's clothing industry has had a much lower level of average wages. The cost of living in October 1943 at the scale of January 1941 amounted to only $23.79 per week, while the net spendable earnings rose to an average of $28.69. Thus, the married worker at the average wage level for women's clothing enjoyed a gain of nearly $5 per week after bonds and taxes. One factor was the comparatively low level of taxes for a worker with three dependents and an income of $33 a week; total income, victory, and social-security taxes amounted to less than $1 a week.

Typical of the situation of married workers in many industries was that of the steel workers, whose gross weekly earnings advanced by 57.4 percent, from an average of $33.60 in January 1941 to an average of $52.88 in October 1943. In the latter month the cost of a January 1941 level of living was $41.04, while the average spendable earnings had advanced to $43.68. The average steel worker with three dependents thus had a net gain of $2.64 per week after paying about $4 in taxes and subscribing $5.29 in bonds.

TABLE 4.—*Spendable Weekly Earnings of Factory Workers, October 1943, Compared With Earnings Required To Maintain January 1941 Living Standard*

WAGE EARNER SUPPORTING AN ADULT AND 2 CHILDREN

Industry	Percent of increase in gross weekly earnings, January 1941–October 1943 (1)	Earnings required to maintain living level of January 1941 (2)	Net spendable earnings, October 1943 (3)	Addition (+) to or deficiency (−) of spendable earnings (4)	Bond purchases at 10 percent of gross earnings (5)	Taxes: Income, victory, and social security (6)	Employment (in thousands), December 1943, in— Specified industry (7)	Employment (in thousands), December 1943, in— Similar industries (*) (8)
All manufacturing	68.4	$32.54	$38.19	+$5.65	$4.49	$2.18	13,870	13,870
Durable goods	68.2	37.24	42.68	+5.44	5.13	3.59	8,397	8,397
Nondurable goods	54.6	27.79	30.66	+2.87	3.52	1.00	5,473	5,473
28 selected industries [1]								
Newspapers	21.4	46.61	39.21	−7.40	4.63	2.48	113	264
Rayon and allied products	35.8	33.48	32.42	−1.06	3.72	1.08	53	93
Machine tools	37.8	49.05	45.41	−3.64	5.53	4.40	92	512
Baking	37.7	32.33	31.74	−.59	3.64	1.04	263	481
Boots and shoes	44.7	23.91	24.75	+.84	2.83	.74	176	403
Electrical equipment	46.9	40.54	40.88	+.34	4.88	3.00	(2)	698
Prints	47.9	36.48	37.68	+1.20	4.42	2.07	30	144
Paper boxes	48.0	27.20	28.74	+1.54	3.30	.92	86	211
Carpets and rugs	49.4	30.76	32.75	+1.99	3.76	1.10	21	52
Hosiery	51.3	22.61	24.48	+1.87	2.80	.73	113	396
Chemicals, not elsewhere classified [3]	52.1	40.44	42.00	+1.56	5.03	3.30	121	973
Meat packing	56.3	32.79	36.16	+3.37	4.19	1.59	171	212
Woolen textiles	57.2	26.61	29.85	+3.24	3.42	.96	160	160
Blast furnaces, steel works	57.4	41.04	43.68	+2.64	5.29	3.91	503	1,205
Cotton textiles	57.5	19.05	21.52	+2.47	2.46	.60	473	522
Automobiles	57.9	46.04	48.32	+2.28	5.95	5.25	762	803
Castings, gray iron	62.6	37.21	41.38	+4.17	4.95	3.18	78	255
Shirts, etc., men's	61.8	17.37	20.17	+2.80	2.30	.54	56	99
Planing and plywood	63.4	27.49	32.04	+4.55	3.68	1.06	79	119
Shipbuilding	66.9	46.04	50.58	+4.54	6.29	6.04	(2)	1,305
Cars	68.8	36.12	41.64	+5.52	4.99	3.29	(2)	427
Women's clothing, not elsewhere classified [4]	69.0	23.79	28.69	+4.90	3.29	.92	230	701
Underwear	71.3	18.14	22.26	+4.12	2.54	.63	13	52
Agricultural machinery	73.5	36.55	43.00	+6.45	5.18	3.61	43	333
Castings, malleable	76.1	34.72	41.87	+7.15	5.02	3.30	26	110
Typewriters	82.3	32.26	40.42	+8.16	4.81	2.90	13	152
Locomotives	82.6	42.50	51.02	+8.52	6.35	6.14	(2)	(2)
Fertilizers	83.7	19.19	25.22	+6.03	2.89	.77	22	22
SINGLE WAGE EARNER WITH NO DEPENDENTS								
All manufacturing	68.4	$32.54	$32.76	+$0.22	$4.49	$7.62	13,870	13,870
Durable goods	68.2	37.24	37.25	+.02	5.13	9.03	8,397	8,397
Nondurable goods	54.6	27.79	26.15	−1.64	3.52	5.51	5,473	5,473
28 selected industries [1]								
Newspapers	21.4	46.61	33.75	−12.86	4.63	7.94	113	264
Rayon and allied products	35.8	33.48	27.57	−5.91	3.72	5.93	53	93
Machine tools	37.8	49.05	39.72	−9.33	5.53	10.08	92	512
Baking	37.7	32.33	27.06	−5.27	3.64	5.72	263	481

See footnotes at end of table.

TABLE 4.—*Spendable Weekly Earnings of Factory Workers, October 1943, Compared With Earnings Required To Maintain January 1941 Living Standard*—Continued

SINGLE WAGE EARNER WITH NO DEPENDENTS—Continued

Industry	Percent of increase in gross weekly earnings, January 1941–October 1943	Earnings required to maintain living level of January 1941	Net spendable earnings, October 1943	Addition (+) to or deficiency (−) of spendable earnings	Bond purchases at 10 percent of gross earnings	Taxes: Income, victory, and social security	Employment (in thousands), December 1940, in—	
							Specified industry	Similar industries [a]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Boots and shoes	44.7	$23.91	$21.56	−$2.35	$2.83	$3.93	176	48
Electrical equipment	46.9	40.54	35.40	−5.14	4.88	8.48	(2)	68
Paints	47.9	36.48	32.32	−4.16	4.42	7.43	30	14
Paper boxes	48.0	27.20	24.68	−2.52	3.30	4.98	86	21
Carpets and rugs	49.4	30.76	27.83	−2.93	3.76	6.02	21	2
Hosiery	51.3	22.61	21.29	−1.32	2.80	3.92	113	36
Chemicals, not elsewhere classified [3]	52.1	40.44	36.50	−3.94	5.03	8.80	121	87
Meat packing	56.3	32.79	30.76	−2.03	4.19	6.99	171	22
Woolen textiles	57.2	26.61	25.53	−1.08	3.42	5.28	160	16
Blast furnaces, steel works	57.4	41.04	38.20	−2.84	5.29	9.39	503	1,26
Cotton textiles	57.5	19.05	18.94	−.11	2.46	3.18	473	32
Automobiles	57.9	46.04	42.48	−3.56	5.95	11.08	763	80
Castings, gray iron	62.6	37.21	35.96	−1.25	4.95	8.60	78	25
Shirts, etc. men's	61.8	17.37	17.95	+.58	2.30	2.76	56	9
Planing and plywood	63.4	27.49	27.26	−.23	3.68	5.84	79	11
Shipbuilding	66.9	46.04	44.70	−1.34	6.29	11.92	(2)	1,30
Cars	68.8	36.12	36.22	+.10	4.99	8.71	(2)	47
Women's clothing, not elsewhere classified [4]	69.0	23.79	24.62	+.83	3.29	4.99	220	70
Underwear	71.3	18.14	19.60	+1.46	2.54	3.29	13	2
Agricultural machinery	73.5	36.55	37.47	+.92	5.18	9.14	43	33
Castings, malleable	76.1	34.72	36.33	+1.61	5.02	8.80	26	11
Typewriters	82.3	32.26	34.95	+2.69	4.81	8.37	13	12
Locomotives	82.6	42.50	44.44	+1.94	6.35	12.08	(2)	(2)
Fertilizers	83.7	[5] 19.19	21.85	+2.66	2.89	4.13	22	2

[a] Industries were grouped on the basis of similarity of experience with respect to earnings, not with respect to product.
[1] In ascending order of percent of increase in gross weekly earnings.
[2] Information not available for publication.
[3] Excludes paints, drugs, perfumes, soap, rayon, gases, cottonseed oil, and fertilizers.
[4] Excludes corsets and millinery.
[5] October 1940 substituted for January 1941, to avoid seasonal distortion.

The married workers who received less than a 40-percent increase in gross weekly earnings after January 1941 faced a net loss in spendable earnings as compared with living costs. In the rayon (chemical) industry, for example, gross weekly earnings rose by 35.8 percent, from $27.40 to $37.22 a week. The cost of a $27 standard had advanced to $33.48 by October 1943, while net spendable earnings averaged $32.42. There was a net deficit of about $1 a week to the average married worker, who had paid $1.08 in taxes and subscribed $3.72 in bonds.

WORKERS WITHOUT DEPENDENTS

The average rise in the spendable income of factory workers without dependents has been about the same, since January 1941, as the rise in living costs. The second section of table 4 shows a calculated addition of spendable earnings over the cost of a 1941 living standard, amounting to 22 cents a week, after the deduction of $7.62 for taxes and $4.49 for war bonds. This apparent addition to spendable earnings is within the range of error of the estimates.

A single worker without dependents could pay his taxes, buy his suggested quota of bonds, and maintain his pre-war scale of living if he had an increase of about 60 percent in his gross weekly earnings.

In cotton goods this position was approximately achieved. As a result of a 57½-percent rise in the average of gross earnings, the average of net spendable earnings rose to $18.94 per week by October 1943, or slightly less than the current cost of the $15.44 scale of living in January 1941. Cotton-mill workers enjoyed a relatively favorable trend of earnings from their low average level of 1941. However, only about one-fourth of the single workers who remained attached to their respective industries had a net addition to spendable earnings in October 1943 above the cost of their 1941 level of living.

The case of the newspaper workers is an extreme one, as has been noted previously. Gross earnings in this single case did not advance as rapidly as living costs, yet taxes of $7.94 per week were due on the average earnings of $46.33. After deducting these taxes and a bond subscription of $4.63 per week, net spendable earnings for the single worker amounted to only $33.75, or $12.86 less than the current cost of the average pre-war scale of living of newspaper workers.

In the steel industry (blast furnaces, steel works, and rolling mills) the half million workers had average gross earnings of $52.88 in October 1943, slightly above the average for factory workers generally. These gross earnings had advanced by 57.4 percent since January 1941. After taxes of $9.39 per week and bond purchases of $5.29 per week, the net spendable income of steel workers who had no dependents averaged only $38.20. Meanwhile increased prices had raised the cost of the workers' former scale of living from $33.26 in January 1941 to $41.04 in October 1943. Spendable earnings for the single workers fell short of maintaining their pre-war scale of living by $2.84 a week. A similar situation was faced by single workers in the textile-machinery, steel-casting, machine-shop, and rubber-tire industries which, with steel works, employed 1⅛ million wage earners.[5]

The experience of shipyard workers was even more remarkable in some respects than that of the steel workers. Shipyards are noted for increasing their wage scales to attract labor and for paying premium overtime rates to a considerable proportion of their workers. Hence, a substantial advance of spendable earnings might well have been expected. Actually the gross earnings of shipyard workers advanced by 66.9 percent to an average of $62.91 in October 1943. However, earnings of $62.91 subjected the single worker to taxes of $11.92 and in addition he was expected to subscribe $6.29 to war bonds. The remaining spendable income of the average shipyard worker who had no dependents was $44.70. Meanwhile a scale of living which cost $37.31 in January 1941 (corresponding to average spendable earnings at that time) cost $46.04 in October 1943. Thus the spendable earnings of a shipyard worker without dependents fell short of meeting the cost of his pre-war scale by more than $1.00 a week. The former standard of living could be maintained, of course, if the worker refused to subscribe for his whole quota of bonds. On the other hand, the cost-of-living calculation as presented cannot take account of the extra costs faced by a worker who migrated into a shipyard community from a distance.

[5] Column 8 of table 4 shows the employment in industries which had an experience closely similar to that of the industry named in the stub of the table. A total of 104 manufacturing industries yielded information on weekly earnings which could be compared. The 28 industries listed in tables 3 and 4 illustrate the whole range of experience in the broader list of 104 industries. Detailed figures relating to the remaining industries will be supplied on request.

INTERNATIONAL LABOR CONFERENCE OF 1944

By CARTER GOODRICH, *United States Labor Commissioner, Department of Labor*[1]

THE International Labor Conference of 1944 will open at Philadelphia on April 20.

The decision to hold the Conference was made by the Governing Body of the International Labor Office at a meeting in London in December 1943. Two aspects of this action are significant. The first is that the Conference is a regular meeting of an established organization. The second is that the Conference will make "Recommendations to the United Nations."

The calling of the Philadelphia Conference is a sign that the United Nations are determined to prepare themselves for the tasks of peacemaking and reconstruction even while the tempo of the war itself is still mounting. The need in the labor field is obvious and urgent. The problems that every nation will face in the shift from wartime to peacetime employment, the labor problems already confronted by the United Nations in the occupation of Italy, and the greater responsibilities they will assume with final victory call for consultation and decision.

The method of consultation is also significant. As part of the preparation for the peace settlement, the Philadelphia Conference will take its place alongside those of Hot Springs and Atlantic City. There is, however, one important difference. The United Nations Conference on Food and Agriculture set about the creation of a wholly new international organization. The Atlantic City Conference was itself the first meeting of a new agency, the United Nations Relief and Rehabilitation Administration. In the field of labor, however, a different course has been chosen. Here there was in existence an established institution in active operation, and the United Nations represented at the London meeting indicated their intention to make full use of it. This they were prepared to do, not only because of the experience gained by the I. L. O. in nearly 25 years' activity, but above all because it is an organization in which the representatives of labor and industry stand on an equal footing with representatives of government.

This point was made clear by the British Foreign Secretary, Mr. Eden, who addressed the closing session of the London meeting. He spoke of eight words in the fifth point of the Atlantic Charter—"improved labor standards, economic advancement, and social security"—as summing up the social objective of the United Nations. He continued:

> If—and this is a big "if"—the International Labor Organization had not existed, we should find it necessary to try to create it now, because it is only a tripartite organization like this, which represents Governments, employers, and workers, which can help us to give effect to this social objective which I have described.

At the same meeting, the representative of the United States Government, who had suggested "Recommendations to the United Nations" as an item for the agenda, said that this proposal "in a sense defined, or attempted to define, the relation between this International

[1] Mr. Goodrich represents the Government of the United States on the Governing Body of the International Labor Office and is Chairman of the Governing Body.

Labor Conference and the United Nations." He declared that this Conference "can perform for the United Nations a very important service in discussing these questions, which it is high time that the United Nations should discuss, and for the discussion of which they would have had to find some other agency if this Organization had not been built on sound foundations in 1919 and had not been preserved in vigor and efficiency during this war."

The I. L. O. and the United Nations

The alinement of forces which makes the International Labor Organization an agency to which the United Nations can appropriately turn was already beginning to be clear before the war started. One after another, Germany, Italy, and Japan had withdrawn from the Organization. The United States had joined the I. L. O. in 1934 and was taking an increasingly active part in its affairs. When the war broke out an American, John Winant, was Director of the International Labor Office and it was he who moved the working center from Geneva to Montreal, after the fall of France, in order to make sure that the Organization could continue to function freely as an instrument of the democracies.

In October and November 1941, the I. L. O. held a Conference in New York and Washington that was attended by representatives of 35 governments and by employers and workers of many lands.[2] This was 6 weeks before the attack on Pearl Harbor, and the United States and more than half of the nations represented were then neutral. Yet by unanimous vote, the Conference adopted, on the motion of the government, employer, and worker delegates from the United States, a declaration that a victory of the free peoples was "an indispensable condition of the attainment of the ideals of the International Labor Organization." A still more strongly worded resolution was presented to the Conference on the motion of all the workers' delegates present and was carried by a vote that was unanimous except for the abstention of the government delegates from Argentina. This resolution expressed "profound gratitude to the brave peoples who are fighting against the most savage barbarians that history has ever known," and urged "all free peoples to contribute to the uttermost limit of their power for the victory of China, Great Britain, Russia, and their Allies by supplying all the arms which their industry can produce."

The present membership of the International Labor Organization consists of the countries which are members of the League of Nations;[3] of France, whose relationship to the League has not yet been reestablished since the formation of the Committee of National Liberation; and in addition, of the United States, Brazil, Chile, Costa Rica, Hungary, Peru, and Venezuela. Certain of the Axis satellites, such as Finland, Hungary, and Bulgaria, remain on the rolls but will not be represented at the Philadelphia Conference. Delegates from a number of neutral countries will be present, perhaps including several that were not represented in New York in 1941. It is, however, the United Nations which provide the greater part of the Organization's membership, leadership and support.[4] One great member of the

[2] See Monthly Labor Review, December 1941 (p. 1448) and February 1942 (p. 305).

[3] Including Haiti, which has decided to remain in the I. L. O. after its resignation from the League takes effect in April 1944.

[4] Of the assessments paid to the I. L. O. during the year 1943, 91 percent came from members of the United Nations, 5 percent from "associated nations," none from enemy countries, and 4 percent from other nations.

United Nations, Soviet Russia, is at present outside the I. L. O., but the Secretary of Labor has expressed her hope that the Soviet Union would be represented at the Conference.

The Governing Body in London

The Governing Body, which called the Conference, met in London from December 16 to 20. Its meeting was opened by an address by Mr. Bevin, British Minister of Labor, in which he declared that he looked upon the I. L. O. "as the body which will be charged with the duty of assisting governments, through its advice, to give effect to Article 5 of the Atlantic Charter." Referring to that article, he said:

> I claim that such a declaration as this reveals an outlook very different from that which prevailed in the last war. The main consideration then was the political aspects of the future; power politics. Now labor and industrial aspects assume their rightful place. This at once constitutes an opportunity but equally a responsibility for the International Labor Organization.

In the government group, Great Britain was represented by Sir Frederick Leggett, of the Ministry of Labor, and China by its Ambassador to the Netherlands, Dr. Wunsz King. The Governments of Belgium, Norway, the Netherlands, Poland, and Yugoslavia were represented by their ministers of labor or of social affairs. The spokesman for the French Committee of National Liberation was its Commissioner for Social Affairs, M. Tixier, who for a number of years was an Assistant Director of the International Labor Office. Brazil was represented by its permanent delegate, Dr. Lourival Fontes; Chile and Mexico by their ministers in London; and Canada and India by their high commissioners in London. The United States Government was represented by the Chairman of the Governing Body, assisted by Miss Frieda Miller, formerly Industrial Commissioner of the State of New York and now Special Assistant to the American Ambassador in London.

The employers' group was led by Sir John Forbes Watson, Great Britain, and members were present from India and South Africa. The regular United States member, Henry I. Harriman, was unable to be present, but his place was taken by Philip D. Reed, formerly chairman of the board of the General Electric Co., and now in charge of the United States Mission on Economic Affairs in London.

The workers' group consisted of Robert J. Watt, United States; Joseph Hallsworth, Great Britain; J. Rens, Belgium; W. Schevenels, secretary of the International Federation of Trade Unions; O. Hindahl, Norway; A. Gazier, France; P. Krier, Luxemburg; there were also Czech, Dutch, Polish, and Spanish workers as substitutes. Two or three members of the workers' group had come recently from underground activities on the continent of Europe.

The proposals of the International Labor Office were put forward by its Acting Director, E. J. Phelan, who was accompanied by the American Assistant Director, Lindsay Rogers, and other members of the staff. As a member of the staff of the British delegation to the peace conference in 1919, Mr. Phelan took a large part in the drafting of the constitution of the International Labor Organization and has been in its service since its inception.

One of the questions raised at the Governing Body meeting was that of the creation of a set of new international industrial committees. It was first put forward by Mr. Bevin:

> I am a great believer in what I call the value of the "occupational groups." Let miners meet, whatever their race or language, and they will be bound together by coal and their common interests; let railwaymen meet, or seamen; textile workers or workers in the metal trades; or any of the great occupational groups that enter into international trade. Once they are brought together in a room and have discussed common problems the racial distinction sinks into the background and the common interest rises uppermost. With the world so small as it is and the development of the conception of the United Nations, I would urge the I. L. O. to give through the Governing Body, the most serious consideration to bringing together those great occupational or technical groups in order that they may not only discuss comparison between their wages, conditions, output, and things of that kind, but other matters of wide common interest, so that their trades may be so organized as to supply the peoples with their requirements without commercial rivalry or war.

For this there was strong support in I. L. O. history. One of the Organization's greatest achievements has been the building up of an International Seamen's Code setting minimum conditions of labor in the maritime field, and much of this success has been due to the work of a Joint Maritime Commission consisting of shipowners and seamen from a number of countries. The British Government proposed the establishment of similar committees in textiles, coal mining, iron and steel, the metal trades, and several other industries. The proposal, though not in form for immediate adoption, was favorably received, and action on it may be expected at the April meeting. The United States Government indicated its approval of the suggestion, with the proviso that government experts, as well as employer and worker members, should take part in the work of these committees.

The main business of the Governing Body was to plan the 1944 Conference. The decision on the place was made after the receipt of a telegram from Secretary of State Cordell Hull, extending the invitation to meet in the United States. Feeling the danger that post-war preparations in the labor field might be made too late for maximum effectiveness, the Governing Body chose for the Conference the earliest date which the representatives from the most distant countries were able to accept. Still more important were the decisions which set the program of the Conference and defined the scope of its work.

What Will the Conference Do?

The agenda of the Conference consists of the following five items:

1. Future policy program and status of the International Labor Organization.
2. Recommendations to United Nations for present and post-war social policy.
3. The organization of employment in the transition from war to peace.
4. Social security: Principles and problems arising out of the war.
5. Minimum standards of social policy in dependent territories.

In addition, the Conference will have before it a Director's Report and the annual reports from the nations regarding the application of the I. L. O. Conventions, or labor treaties, to which they have agreed. This year the Conference will also renew the membership of the Governing Body. Sixteen of the 32 seats belong to governments. Of these, 8, including that of the United States, are held permanently by the nations of chief industrial importance. The other 8 are filled by election from the smaller nations. Similarly the 8 worker members,

and the 8 employer members are elected by the votes of the worker's and employers' delegates to the Conference, respectively. On this occasion, in view of the hopes for an early liberation of the European continent, it is possible that members may be chosen to serve only until the next Conference rather than for the normal term of 3 years.

At the Philadelphia Conference, each member is entitled to be represented by two government delegates, one employers' delegate and one workers' delegate, each with as many as six technical advisers. How will these delegates deal with the questions on the agenda? Pre-war sessions of the Conference made their main business the adoption of Conventions, or labor treaties, embodying specific labor standards to be given the force of law when ratified by individual nations. Sixty-seven such treaties have been worked out by the negotiation and give-and-take of government, worker, and employer delegates.[5] The 1944 Conference may add one Convention to this number, but that will not be its main business. The questions before this Conference are broader than those which have been covered by Conventions; the chief duty of the Conference will be to formulate recommendations on questions on which action is urgently needed in the making of the peace settlement and in the immediate post-war period.

What will the Conference recommend? For this an answer must await the Conference itself. What should the Conference recommend? This question a government official should not attempt to answer while the government's instructions to its delegates are still in process of formulation. It is possible, however, to indicate some of the specific problems with which the delegates will be expected to deal. The remainder of this article, therefore, will discuss in turn each of the five items of the agenda.

THE FUTURE OF THE I. L. O.

"Remodeled and reequipped to meet new circumstances, the I. L. O. has indeed a great potential future." This was the comment of the London Times during the recent meeting, and the Governing Body decided to put such remodeling at the head of the Conference program. The I. L. O. will not of course abandon its central purpose of raising living standards by common action throughout the world. Certainly it will not give up its tripartite representation or sacrifice the unique character given it by the direct participation of workers and employers. It will need, however, to develop new activities and new instruments in order to face a task of re-creation even more profound than that which confronted the peacemakers of 1919. Accordingly, "measures to render the function of the International Labor Organization more effective", as the I. L. O. Memorandum [6] on the Conference indicates, will take a leading place in the discussion.

One line of advance, as already indicated, may be the development of new organs to deal with the problems of the great world industries. Another may well be the further development of the regional activities of the Organization. For this, the way has been blazed by two highly successful conferences of the American nations that are

[5] The recent action of the British and Belgian Governments in accepting certain Conventions dealing with colonial labor brings the total number of national acts of ratification to 887.

[6] The International Labor Office, Memorandum on the Twenty-Sixth Session of the International Labor Conference.

members of the Organization—one held in Chile in 1936, and the other in Cuba late in 1939. It should be possible to hold such meetings for other regions also, for Asia, for example, or for the Near East. Perhaps this policy should be extended still farther to the founding of regional offices of the I. L. O. and possibly even to the adoption of regional Conventions or treaties. Other proposals will deal with measures for the more effective enforcement of Conventions and for an extension of the obligations of governments to report on their labor and social policies.

The Conference will also consider the relations between the I. L. O. and other international organizations. It will need to review its relationship with the League of Nations, with which the I. L. O. has been associated from the beginning. On this point the workers' group insisted that the Conference should consider the question of the complete financial separation of the two bodies. It is particularly important that the Conference should consider appropriate methods of cooperation with the new international organizations which have been or are being created, and perhaps with such regional bodies as the Anglo-American Caribbean Commission and the projected Council for Southeast Asia. A part of the basis for such liaison was laid by the presence of I. L. O. observers at the first meeting of the United Nations Relief and Rehabilitation Administration.

On this question, the British Foreign Minister commented as follows:

> As we make progress—and now I speak not only of your work, but of the wider field of international policy—we shall find which organization is best adapted to deal with each particular set of problems; and amongst these your own Organization must always play, in my judgment, a prominent part. No single organization can by itself cover the whole field; each organization must have its special sphere; but their work must be interrelated and truly and accurately coordinated. We, the governments, are at work already, as I have said, on this problem, and you, I am happy to say, are already associated with some of the organizations doing this work, such as UNRRA and the Food Commission and so on. No doubt as this work develops there will be other organizations and other international bodies with which you will be associated and with whom you will work; but your main task, I repeat, must surely be to help in the formulation of policy in accordance with Article V of the Atlantic Charter. Your Organization will no doubt scrutinize plans for economic and financial reconstruction from the point of view of the social objectives at which you aim, and in doing this you will help to make sure that we steadily pursue the road which the United Nations have chosen to travel.

The last sentence is particularly significant. It points to the close relationship between labor and general economic policy. The statesmen of the United Nations have shown an increasingly clear recognition that the two are inseparably linked. As President Roosevelt said at the 1941 Conference, "Social and economic problems are not separate water-tight compartments in the international any more than in the national sphere." At the same time, those who are primarily concerned with the raising of living standards have learned that the basic condition of such advance is the establishment of a sound and expanding economy. Within the councils of the I. L. O., this realization has been more clearly defined as American influence has increased.

This poses the question of the relationship between the I. L. O. and the specifically economic organizations. Certainly the I. L. O. will not be the main technical and operating instrument dealing with

international economic questions. It is not equipped for this role and could not readily be fitted to perform it. Negotiations between governments for the establishment of an institution for currency stabilization are at an advanced stage; the United States Government has made proposals for an international development agency, and there may well be other bodies developed for specific economic tasks. In these fields, the Economic, Financial, and Transit Department of the League has done outstanding research. The concern of the I. L. O. is with the social objectives toward which economic policy must be aimed. This interest is fundamental and inescapable in terms of its own central purpose. For this reason it is essential that the International Labor Organization should have what the Acting Director has called "the right of scrutiny," the right to examine the economic policies that are being pursued in order to make sure that they will in fact serve the purpose of promoting full employment and a rising standard of living throughout the world.

At the London meeting this claim was put forward as vigorously by the leader of the employers' group as by any of the spokesmen for the workers. Their comments indicate its essential basis. To them the I. L. O. is a channel for the expression of labor and employer opinion. The Organization's concern with the broader economic problems is based on its character as the one international forum so far established in which nongovernmental groups have an official standing in the formulation of international policy.

RECOMMENDATIONS TO THE UNITED NATIONS

The heading is intentionally wide in coverage. Recommendations on what? Discussion at London referred to "the labor problems that the United Nations are facing * * * and having to solve in the process of winning the war * * * and the problems they will have to face and are already beginning to face in making the peace settlement." The intention is to give room for a wide range of recommendations extending all the way from the most immediate and urgent issues of military occupation to the most general principles of social and economic policy. The common element is the responsibility of the United Nations for waging the war and making the peace.

At one end of this gamut lies the question of "the social aims of economic policy." It is expected that the Conference will propose to the United Nations a declaration of principles regarding the fundamentals of economic policy. It will consider what measures should be taken "internationally and nationally to ensure full employment, social security, and rising standards of living." Among them it will no doubt discuss ways and means for expanding world production and world trade. It may be expected to emphasize the need of international investment for the rebuilding of devastated areas and the development of economically backward parts of the world. Many delegates will no doubt plead that the hope of raising the standard of living of their peoples lies in the gradual introduction of the machine technique to replace the back-breaking and pitifully inefficient methods of hand labor. In all probability the Conference will express the opinion that there must be social scrutiny of the purposes for which the money is to be spent and also of the conditions under which the work is to be carried on. These might well include the enforcement of certain minimum labor standards set modestly and realistically at

the beginning, but advancing progressively as productivity increases. A discussion of these questions in a tripartite conference should have two advantages: It should place the influence of the Organization on the side of the economic policies that will do most to raise the standard of the masses of the people throughout the world; and it should also serve to consolidate the support of such policies on the part of the great organizations of labor and industry.

At the other end of the gamut is an issue that is immediate, urgent, and highly controversial—that of the labor policies to be pursued "in the territories of Axis countries occupied by the forces of the United Nations." This was placed on the agenda with the full approval of the agencies of the United States Government most directly concerned. How are wages to be set? How are workers to be represented? What is to be done about employment exchanges, about social insurance? These and countless other questions confront the administrator as soon as a territory is occupied. Beyond these lie the longer-run questions of the labor program to be pursued with relation to the defeated countries. What measures, for example, are to be taken for reestablishing in these areas freedom of association for unions and employers? The answer to this question is as important for the maintenance of peace as for the conditions of labor.

More broadly, the "Recommendations" are intended to cover all the labor provisions of the peace settlement. What mutual obligations should the United Nations accept with respect to the improvement of labor and living conditions? The opportunity of the peace settlement—however it may be made—may well be taken to bring about the general acceptance of parts of an international labor code by a swifter and more concerted process than that of the piecemeal ratification of Conventions by individual nations. It will be the duty of the Conference to consider specific provisions that might be included in such a common enterprise.

THE ORGANIZATION OF EMPLOYMENT

What we want, as the British workers' member said at London, is "the organization of full employment." In the United States, as in other nations, we are already attempting to prepare for the great task of placing in peacetime employment the millions of men and women now in the services and the other millions engaged in war production. We face this problem knowing that neither our system nor any other system can safely face the prospect of long-continued mass unemployment.

The issue is partly one of general economic policy. It is also one of specific measures for the organization of the labor market. The I. L. O. before the war did pioneer work on the efficient organization of employment services and on the correct timing of public works. It has made contributions during the war on questions of manpower organization.[7] It should have proposals to make on the adaptation of wartime manpower machinery for use in the difficult transition to peace.

What measures should be adopted for orderly guidance to peacetime jobs? What should be the part of public works in a balanced

[7] See particularly its reports on Labor Supply and National Defence, Wartime Transference of Labor in Great Britain, and Management and Workers in British War Production. This part of the work has been under the direction of M. Pierre Waelbroeck whose promotion to Assistant Director has just been announced.

program for employment? What should be paid on demobilization? Should there be dismissal pay for war workers? How are workers to be retrained for new occupations? How are the wounded to be rehabilitated? On these questions the Conference will give opportunity for comparing, developing, and perfecting national plans of action.

SOCIAL SECURITY

Social security also is a field in which the I. L. O. has rendered outstanding service. Standards of social insurance embodied in Conventions and Recommendations adopted at Geneva have had wide influence. In addition, officials from the I. L. O. staff have often given expert advice to the governments of many countries, including that of the United States, in the development of their systems of social-security administration.

During recent years this work has been greatly extended under the leadership of Dr. Osvald Stein, chief of the Social Insurance Section, and since 1942 Assistant Director of the International Labor Office. Dr. Stein assisted a number of the Latin-American countries, was called to London to testify before the Beveridge Committee, and was the organizer and (until his recent death) the active spirit of the Inter-American Committee on Social Security.

The proposals under this item are largely the result of international discussions and negotiations carried on by Dr. Stein. They will include a series of recommendations attempting to crystallize and to state in internationally acceptable terms the essential elements of the notable series of proposals for advances in social security put forward in the United States and in other countries in such studies as the Beveridge Report. These will cover both medical care and the maintenance of income. The Conference will also consider recommendations regarding "the maintenance of the social insurance rights of members of the armed forces, the reestablishment of the financial position of institutions in occupied countries," and methods of cooperation among the social-security administrations of different countries.

Finally, the Conference will face the thorny and controversial issue of providing pension rights for displaced persons in Europe and particularly for the millions of laborers from the occupied countries who have been forced to work for the German war machine. On this question the Office will propose the adoption of a binding international treaty.

SOCIAL POLICY IN DEPENDENT TERRITORIES

Colonial labor policy has also been a field of important I. L. O. activity. Its four "native labor" Conventions provide for the abolition of forced labor and of penal sanctions for failing to perform labor and for the elimination of the grossest abuses in the recruitment of native workers. These have already won wide acceptance by the colonial powers. It is possible that the Conference may recommend as part of the peace settlement the universal acceptance of these minimum obligations by all nations retaining authority over dependent peoples.

These measures, however, deal only with the crudest and most urgent problems. They are, therefore, only the beginnings of a colonial labor code. To them the Conference doubtless will add

a series of recommendations for standards covering a much wider range of conditions of work. Nor will they be confined to labor questions in the narrow sense. The spirit of the times demands a new approach to the problems of what have been the dependent peoples of the world. It is now recognized that this must include greater emphasis than in the past on social and economic development. "Tropical poverty" is not the whole of the colonial problem, but it is an important part of it. The Conference has therefore been asked to "lay down the social purposes of economic development in dependent territories."

The I. L. O. at Work

A newspaper chose the above heading for its description of the Governing Body at London. It should fit still better the meeting that is ahead. Philadelphia will be a working conference and a responsible one. The I. L. O. might have avoided the risk of meeting in the very floodtide of war. It could have chosen a conventional rather than an audacious agenda. It need not have assumed a specific obligation to the United Nations. Yet if it had not done these things, it would have failed in its responsibility of drawing into the work of reconstruction the labor and employer groups which give it its unique character and strength.

The issues before the Conference are of deep concern to the American people. At Philadelphia they will be able to see and to judge the International Labor Organization at work. They will see it at a time when it faces its severest test and its greatest opportunity.

Demobilization of Manpower, 1918-19[1]

Part 1.—Plans for Returning Soldiers to Civil Life

Summary

UNTIL the war is won, the spotlight must be focussed on the process of building, training, and equipping our armed forces. Nothing can be allowed to detract from the concentration of national energy necessary to win a complete victory over the enemy at the earliest possible moment. The army of production takes its place, along with the armed forces, in this concentrated effort. Nevertheless, a knowledge of the relative and absolute magnitudes of the mobilization of manpower and economic forces involved in this war requires that, behind the scenes, serious thought be given to the problems of returning the soldier and the industrial worker to peacetime activities.

The same necessity existed in the first World War. Study of the problem of demobilization of the soldiers was not begun until a month before the end of the war, however, and then the need for haste resulted in mistakes that might have been avoided under more leisurely planning and consideration. No program was adopted for the effective passing of the industrial worker to peacetime production. The inevitable appearance of unforeseen problems which arose during demobilization at the close of the first World War will repeat itself at the close of this war. Further, the task will be much greater; the number of men will be three times as large as in 1918–19 and soldiers from the United States will have served longer and in more combat areas, so that the period of their demobilization may be longer than was the case after World War I. The magnitude of current industrial production is a forecast of the problems of transition and contraction.

For these reasons it seems probable that that earlier experience may be of value in planning the gigantic task of demobilization that lies ahead. The present article, which relates solely to the demobilization of the soldiers, reviews the four proposals for the return of servicemen to peacetime pursuits that were advanced in that earlier war period, showing where they originated, who supported them, and their respective merits and disadvantages.

When the first World War came to an abrupt end with the signing of the Armistice on November 11, 1918, the armed services of the United States had been expanded from a peacetime force of about 380,000 to almost 5,000,000. About 3,700,000 of these, constituting the "emergency army" (that is, those enlisted or inducted during the war), were eligible for immediate discharge when the war ended.

Official consideration of plans for the discharge and return of these men to civil life had been started a month before the Armistice. This left far too little time for adequate preparations for so complicated a task. The method finally adopted was the traditional plan for demobilization by military organizations. The military authorities favored this plan and it was the only one for which regulations and administrative procedures could be quickly developed at so late a date.

[1] Prepared in the Bureau's Division of Historical Studies of Wartime Problems by Stella Stewart. Additional parts of this study will appear in future issues of the Monthly Labor Review.

However, three other plans had been advanced, proposing demobilization (a) by industrial needs or occupations, (b) by locality, through the use of the local or regional draft boards, and (c) by length of service.

(a) The first plan, demobilization by occupation, had been adopted originally by the British, but proved to be so unfeasible that new legislation was passed, allowing the men to be withdrawn on the general basis of length of service.

In both Great Britain and the United States it was civilians who proposed and supported the occupational-demobilization plan. The plan's proponents in the United States recognized that, to be successful, it must be predicated upon an exhaustive analysis of the industrial situation of the country, especially if it was to be used for providing employment for skilled and unskilled discharged soldiers, many of whom had developed new proficiencies during their service and would not wish to return to their old occupations. Such an analysis had not been made.

Another major defect of the plan was its disregard of the instinctive individualism of the average American and of the fact that regimentation after return to civil life would prove distasteful. This demobilization system was carefully reviewed by the General Staff but ultimately rejected.

(b) The second method, that of using draft-board machinery for facilitating discharge, was developed by the Provost Marshal General who had been closely connected with the operation of these boards during the war. He argued that the local communities could do more than any other agency to reestablish the released soldier. He insisted that the problem of "finding the job for the men and of replenishing industry and agriculture at the point of depletion" could best be done on a local scale.

His plan was favored by many civilian groups who thought that if the men were returned to the communities from which they came they would be more readily drawn into the economic life of these areas and this, in turn, would relieve the situation in the large industrial cities near debarkation camps, where there would inevitably be a brief period of great unemployment as the munitions plants reverted to peacetime production.

The Provost Marshal General's proposal was forwarded to the Secretary of War and then to the Chief of Staff. However, the military-unit demobilization plan had already been adopted and announced, and it was then too late to utilize even the best features of the draft-board plan.

The value of many of the aspects of the draft-board plan became apparent during the winter and spring of 1919 when the War Department was besieged by citizens of all classes urging that the released soldiers be withdrawn from the industrial centers which were also faced with the problem of dealing with thousands of unemployed war workers for whom the Federal Government had provided no means of carry-over from wartime to civilian employment.

(c) The third method, discharge by length of service, was rejected for valid reasons. The country had been at war for only 18 months, and the majority of the men had been in service a year or less. It was important that the men in France, regardless of period of service, should be returned to this country as soon as possible.

Review of these several proposed systems of demobilization leads to the conclusion that it was regrettable that plans could not have been perfected far enough ahead of the need for their application to have incorporated the best and most feasible features of each. This would have required the sympathetic cooperation of the professional soldiers, familiar with military procedure, and the trained civilian groups which were familiar with the industrial and economic needs of the country.

Expansion of the Army

The story of demobilization of the Army after the first World War cannot be intelligently evaluated without some knowledge of the expansion of the Army to its size at the time of the Armistice. The United States has never maintained a large standing Army, because of its geographical situation and its amicable relations with its neighbors on the North American continent. For protection from foreign aggression, this country has depended upon a strong Navy.

The American people were loath to accept the inevitability of participation in the World War of 1914–18. When the United States entered the war in April 1917, therefore, it was unprepared from both a military and an industrial standpoint. The achievements of supply of manpower and material during the following 18 months were striking and at that time unparalleled.

On April 1, 1917, just prior to the entrance of this country into the war, the personnel of the armed forces of the United States numbered 378,619. Of these, 291,880 were in the Army. Immediately following the declaration of war on April 6, enlistment was accelerated and was heavy throughout April, May, and June.

From the beginning of hostilities the American military experts declared themselves in favor of the "selective draft" as the only democratic method for increasing the size of the Army. They emphasized that it would distribute the burden of combat equitably through all areas of the population, all social levels, and all occupational groups. A bill to provide for "selective service" was introduced into Congress almost immediately after the declaration of war. It was not a popular bill, being termed "the Administration's program of conscription." However, it became a law on May 18, 1917. The act called for the registration of all men "between the ages of 21 and 30 years, both inclusive," but with the proviso that men should be drafted only if voluntary enlistments did not provide the 500,000 additional men needed immediately. It differed from similar acts of the Civil War in that no bounty could be offered to induce enlistments.

Altogether, 9,780,535 men responded to this first registration, held on June 5, 1917. This number proved inadequate for the rapidly increasing military demands, partly because of the number of deferments and exemptions which greatly reduced the number of effectives in Class I, available for military service. Another limitation was the limitation of the age requirements for military service.

On May 20, 1918, Congress passed a Joint Resolution requiring registration of men reaching the age of 21 after June 5, 1917, and authorizing the President to require further registrations. Under this resolution there were two registrations, totaling 10,679,814. It was from these early registrations that all inductions into active service were made.

It became evident by the summer of 1918 that the expanded military campaign proposed for the spring of 1919 would require many more men than were available from the above groups. Therefore Congress in August 1918 extended the age limits for military service to include men between the ages of 18 and 45, inclusive, but the Armistice came before any of the 13,229,762 men registered under the amendment were inducted.

The gradual expansion of the armed forces between April 1, 1917, and the Armistice in November 1918 is shown in the accompanying table.

Expansion of the Armed Forces of the United States After April 1, 1917, and Total Strength on November 11, 1918 [1]

Item	Total	Army	Naval forces
Number in armed forces, April 1, 1917	378,619	291,880	86,739
Additions	4,412,553	3,893,340	519,213
Selective Service	2,810,296	2,810,296	(2)
Enlistments	1,371,970	879,258	492,712
Commissions	230,287	203,786	26,501
Total strength, November 11, 1918	4,791,172	4,185,220	605,952

[1] Report of the Provost Marshal General, December 20, 1918 (tables 79 and 80, pp. 223 and 227).
[2] Additions to Naval forces by induction were negligible.

Troops Eligible for Discharge at Time of Armistice

Only the "emergency army," made up of men enlisted or inducted during the war, was eligible for immediate discharge. What is more, some of the inducted men were en route to camp when the fighting ceased and so were little affected by the problems of demobilization. When the Armistice came, this new emergency army was concentrated in two big groups, consisting of the forces still in cantonments in the United States, and the American Expeditionary Force in France. Small numbers were stationed in the insular possessions and in Siberia. The following statement shows the distribution of the "emergency" troops on November 11, 1918.[2]

	Number	*Percent*
In Europe	1,981,701	53.5
At sea en route to Europe	22,234	.6
In the United States	1,634,499	44.1
Total	3,638,434	98.2
Others	64,839	1.8
Grand total	3,703,273	100.0

Initial Steps Toward Demobilization

The Secretary of War commented in his annual report in 1919: "The problem of demobilization of United States forces was different from that of other countries since its pivotal or key men had not been withdrawn from industry nor had its manpower been drafted to the same extent as those of our Allies."[3] However, later events indicated that, even so, demobilization could not be satisfactorily accomplished

[1] Annual Report of the Secretary of War, 1919, Vol. I, Part I, p. 448.
[2] Ibid., p. 14.

without definite plans developed well ahead of their need. The Secretary himself said, "The first steps in demobilization were taken while the policy itself was being formulated."[4]

The first move toward demobilization made by the General Staff was on October 8, 1918, just a month before the Armistice. It was then suggested that, because of the enormous expense connected with the military establishment and the desirability of a speedy return to normal economic conditions, repatriation and demobilization of the armed forces should be accomplished with the least practicable delay.

At about the same time an informal note was sent to the head of the Army War College: "There are one or two questions it seems to me should be studied and worked out so that you shall be good and ready for any contingency. The first of these is the plan for demobilization and musters out. * * * I do not want to advertise it too much at present as it might be thought to be peace propaganda."[5] The War Plans Division immediately began a study of "plans." Expedition was urged, since other divisions would need to review the final report, but even then great secrecy was urged.[6] Aside from the development of general policies it was necessary for each branch of the service (motor transport, signal corps, engineers, chemical warfare, services of supply) to make its own specific plans.

The formal report to the Chief of Staff analyzing the various proposals for demobilization and making recommendations as to general procedures was not forwarded until 10 days after the Armistice, but undoubtedly major decisions had been reached earlier. No demobilization plan adopted would have been universally acceptable, but this lack of preparedness and its results brought continuing criticism from every quarter.

Proposed Methods of Demobilization

The General Staff reviewed four distinctly different policies for the demobilization of the soldiers at the close of World War I. One was accepted, and three were rejected.

The method adopted, that of discharge by military units, is a matter of record. The public is less familiar with the other three plans. They proposed demobilization (a) by industrial needs or occupations, (b) by locality (through the use of the local or regional draft boards, and (c) by length of service.

These methods separate themselves into those originating in civilian groups, whether or not they were in the civil establishments of the Federal Government or attached to the War Department; and those supported by the professional military groups in the offices of the Chief of Staff, the Adjutant General, or the Provost Marshal General.

The civilian programs were the result of investigation and careful consideration by two separate but sympathetic groups. The first open approach to the demobilization problem was through the civilian experts who were working with the War Department on personnel classification. This group included outstanding psychologists and personnel administrators, most of whom were in uniform and working closely with Army officers in the Adjutant

[4] Annual Report of the Secretary of War, 1919; Vol. I, Part I, p. 453.
[5] Army War College files, Chief of Operations, General Staff, to President, Army War College.
[6] Idem, Chief of Operations' Memorandum of October 16, 1918.

General's office. The second civilian group consisted of economists and executives in the Department of Labor (chiefly in the War Labor Policies Board and the U. S. Employment Service) and in the War Industries Board.

There was frequent conference and interchange of ideas among the various civilian groups, but there is little evidence of any genuine effort at mutual understanding between these groups and the military strategists in the War Department. There is, however, considerable evidence that each group pressed its proposals upon the Secretary of War, himself a civilian.

DEMOBILIZATION BY INDUSTRIAL NEEDS OR OCCUPATION

The civilians, both in the established Government departments and in the emergency war agencies, were deeply conscious of the difficult economic, industrial, and fiscal situation which would confront the country with the cessation of production for war, and the inevitable interval of uncertainty as the industries of the Nation took stock and made their essential readjustments of program, plant, and personnel. There was an undisputed need for an extensive and intensive survey of the country's industries, of their ability to return promptly to peacetime production and so keep to a minimum the unemployment attending the transition period. The civilians' study of these questions led them to the conclusion that "the rate of absorption [of labor] into industry is the active and variable factor in the demobilization problem." [7]

It was logical therefore that a proposal for industrial demobilization based upon industrial needs should gain their support.

British plan.—The details of such a plan had been worked out and adopted in Great Britain, partly in the War Office but mainly in accordance with civilian opinion. Under this plan, men needed for industrial and civil reconstruction would be the first to be released from the Army; and the rate of demobilization would be controlled by industrial needs.

A member of the United States Committee on Classification of Personnel of the Army spent some time in England in the spring of 1918. He studied this plan carefully and came back convinced that some adaptation of the plan to the situation in the United States would greatly facilitate industrial readjustment and would insure "that the men in the Army shall be so dispersed that skilled and unskilled labor in its many classifications of kind and degree shall be made available for industrial absorption as needed." [8]

An analysis of the British plan, to be used as a basis for approaching the American problem, was prepared and a recommendation for the adoption of this plan was submitted to the Adjutant General and the Secretary of War in the summer of 1918. The two civilian groups were working together and by the fall of 1918 agreed that, should the plan be adopted, some cooperative arrangement should be made with the Employment Service of the Department of Labor in its administration.

It is possible that the greater problem of the readjustment of the country's industries to peacetime conditions, and concern over the

[7] National Archives. Department of Labor, War Labor Policies Board: Memorandum to Chairman of the Board from Walton H. Hamilton, October 28, 1918.
[8] Army War College. Report to the Secretary of War on British Plans for Demobilization and Recommendations as to the American Program.

effect of the returned servicemen upon a surplus labor market during a period of mounting unemployment, obscured in the minds of these men the fact that the soldier was a citizen with rights and privileges as an individual when he had finally discharged his duties as a soldier. The British plan, as reported, provided that men should be drafted from the Army for service in civil life upon the declaration of peace much as, upon the declaration of war, men were drafted from civil life for service in the Army. Whatever the desirable factors of the plan, it took into little account the instinctive individualism of the average American, and gave scant consideration to the servicemen's possible negative reaction to further regimentation upon his release from the Army, but provided that he should be moved about as best fitted the success of the scheme. This fact was well stated by a member of the staff of the War Labor Policies Board: "Any policy of reconstruction is largely dependent upon the spirit with which it is met by the men to be demobilized. No one can say with certainty what the effect of adventures, discipline, physical training, etc., which men have experienced in the Army, and the psychology resulting from the offer of sacrifice, will be." [9]

Attitude of plan's proponents.—Although the plan for demobilization by industry was ultimately rejected by the Chief of Staff and the Secretary of War, brief consideration should be given to some of its specific details and to the attitudes of some of its supporters. To the Committee on Classifications it was "obvious that America * * * must demobilize by trades if a disastrous condition of unemployment and unrest is not to ensue. Demobilization by * * * any other schedule is not feasible. * * * The interests of the Army * * * must be subordinated to the civic interests." [10]

Under such procedure the primary factor in the priority of demobilization would be the individual's industrial classification, and the first administrative task would be the classification of officers and men by profession, trade, or occupation. This task was already partially done, as the so-called "qualification cards" of the men were based upon their skills and experience at the time they entered the Army. It was suggested that these cards, which had "proved effective in taking men from industry and placing them right in the Army," be used for redrafting them into industry, for, in the opinion of the committee, "there is just as close a relation between classification and placement in industrial life as there is between classification and Army placement; it is all part of the same problem." However, there was no record of new skills acquired in the Army, nor of the possible desire for change resulting from the experiences in the Army and in new and different surroundings. It was granted that an "exhaustive analysis of the industrial situation of the country and the preparation of a program of reorganization on a peace basis" was essential to the functioning of the plan, and it was suggested that the Department of Labor should assume this task.

Economists on the staff of the War Labor Policies Board were, in the summer of 1918, engaged in analyzing the major problems of industrial readjustment. Elaborate memoranda were prepared but they dealt largely with generalizations and were of necessity specu-

[9] National Archives. Department of Labor, War Labor Policies Board: To Chairman from G. S. Arnold, July 24, 1918.

[10] Army War College. Report to the Secretary of War on British Plans for Demobilization and Recommendations as to the American Program.

lative. One member of the staff acknowledged this and urged the substantiation, by fact, of some of the statements made. The following abstract contains the essential statements on the release of the soldier.

> For this large body to be projected upon the community without provision for immediate employment is unthinkable. And however confident we may be that they can shortly be assimilated there is bound to be an intermediate period of great confusion unless some elastic source of employment is provided—work which may be available for all, but work of such a character that, if the conditions of the country provide occupation more rapidly than is expected, it can be postponed for future completion. Enough of such employment should be provided and it should be so elastic in its nature that it will for a period of 2 or 3 years provide work for the maximum estimate of unemployed men, and yet, in part at least, not be sufficiently pressing or important to offer competition to permanent necessary employment. It might be advisable to do much of this work before the men are actually discharged from the Army, with the provision, of course, for the payment of industrial as opposed to military wages. (National Archives. Department of Labor, War Labor Policies Board: Memorandum to Chairman from G. S. Arnold, July 24, 1918.)

A longer and more comprehensive memorandum "Upon the Problem of Demobilization" discussed in great detail the problem in general and the obstacles which would be encountered, and gave many specific suggestions for carrying out a policy of demobilization by industry.

The memorandum stressed the necessity for correlation of military discharge with accessibility to reemployment, without periods of "idleness and dependency." This required recognition of the fact that munitions workers, released in large numbers from war plants, would also be seeking employment. Thus, there were "two complementary problems of employment to be solved. To give employment to discharged soldiers by denying it to munitions workers" was to "solve one problem of unemployment by creating another." In other words, if the situation was to be met squarely, enough jobs must be provided to satisfy both groups, and at a high rate of absorption, for it was probable that the release of war workers would not be at the even flow anticipated for the release of soldiers.

The key problem of providing a "mechanism" for discharge was well stated. There was no doubt that failure so to provide would mean failure of the plan as a whole. "It will probably involve the reorganization of the Army into new units, based upon occupational status, for demobilization purposes. * * * Demobilization will involve not so much legislation as a long series of administrative decisions. Its success depends upon the precision and quickness with which they can be made. This depends upon the range and accuracy of information at hand and upon a mechanism for translating judgments into accomplishments." [11]

The Chairman of the War Labor Policies Board commented to the Secretary of Labor upon the "comprehensive plan" of the Committee on Classification of Personnel and said:

> The function of the War Department as the Committee views it, ends with the actual demobilization of the war, but the Committee keenly appreciates the necessity of conducting demobilization in such a way that it shall best meet the industrial requirements of the country, and shall result in a minimum of unnecessary unemployment, and no breaking down of recently established labor standards. * * * It is necessary to determine when and where the industry of the country can re-absorb the men and whether it is possible to stimulate industry to so great

[11] National Archives, War Labor Policies Board; Memorandum to the Committee on Classification of Personnel of the War Department from Walton H. Hamilton, October 28, 1918.

a degree that this re-absorption can be effectively accomplished. * * * It is unnecessary to dwell upon the disastrous results to labor which may result from allowing the demobilization to take its course without more definite preparation than the present general speculation on problems of reconstruction. (National Archives. War Labor Policies Board: Memorandum from Chairman Frankfurter to Secretary Wilson, October 22, 1918.)

After the Armistice and even after the War Department had announced the demobilization policy which it had adopted, supporters of the industrial plan continued their exchange of views. Some of the salient points of one of these memoranda were as follows:

* * * the physical productive capacity of the country is large enough to furnish employment to all discharged soldiers and munitions workers and to spare. But this does not prove that a purely military demobilization will furnish employment to the discharged as they need it. * * * A haphazard discharge of men and cancelation of contracts will not give men and materials in the order in which they are needed to hasten the resumption of business. * * * Whatever the ultimate capacity of the system to take labor, there are abundant reasons for thinking that unless extreme care is taken the labor market will be glutted. * * * A word must be added about the possibility of local gluts. * * * Unless the flow is locally controlled, soldiers will be demobilized in such centers as Bridgeport, Pittsburgh, and Detroit, in which most of the work now going on is under Government contract. If this happens, soldiers will be sent into markets disorganized by the involuntary discharge of munitions workers through the cancelation of Government contracts. (National Archives. War Labor Policies Board: Unsigned memorandum to Lieut. Col. Coss, a member of the Committee on Classification of War Department Personnel, November 1918.)

All of these statements reveal concern over the inevitable period of unemployment which would accompany contract cancelation, unless the Federal Government made specific provisions for bridging the gap during the months when soldiers would be leaving the Army.

Results of industrial demobilization plan in Great Britain.—Since the American proposal for industrial demobilization was premised upon the British plan which had been worked out with great care, it seems desirable to report upon the results of the British effort. At the time of the Armistice, the United States had been in the war about 18 months, as contrasted with more than 4 years for the British. (The British soldier's length of service therefore parallels the probable experience of the American soldier in this war more nearly than in World War I.) The following record of the British experiment comes from Winston Churchill's story of his participation in demobilization following World War I.[12] In January 1919, 2 months after the Armistice, Mr. Churchill had consented to take over administration of the War Office because the "temper of the Army and the problem of demobilization caused increasing anxiety." He was "immediately confronted with conditions of critical emergency." Under the plan for demobilization by occupation, "key men" in industry were being hurried back from the front regardless of their length of service, but because they were key men many of them had been at the front only a few months. Then, too, the plan lent itself to abuse, and influence released certain men ahead of their comrades without such support but with many months of Army service. The inevitable result was the undermining of Army discipline and the creation of great impatience and resentment on the part of the troops.

It was decided that only one remedy would prove effective—a complete change in the scheme for demobilization. The new policy provided that (1) soldiers should, as a general rule, be released from

[12] Churchill, Winston S.: The Aftermath—1918-28 (Preface and Chapters I and III).

the front in accordance with their length of service and their age, (2) the pay of the Army was to be immediately increased to lessen the gap between the rewards of military and civil employment, and (3) the younger men who had completed training but not yet seen active service were to be sent abroad to serve in the Army of Occupation, in place of the older men and those of long service. Once this new system was understood, the disaffection of the soldiers disappeared and later the men were discharged at an average rate of 10,000 a day.

Mr. Churchill himself deprecated the lack of coordination between the plans for meeting industrial and military needs. Possibly the results would have been better if the military group had been willing to give the new plan a sympathetic hearing and if the civilian originators of the new and untried procedure had tried to integrate it more closely with the traditional demobilization methods of the Army.

DEMOBILIZATION BY LOCALITY

A memorandum recommending discharge of the soldiers through the local draft boards was submitted to the Chief of Staff on November 11, Armistice Day, by the Provost Marshal General who had been in close association with these boards[13] during his administration of the Selective Service Act. His memorandum stated:

> The economic need of finding the job for the man and of replenishing industry and agriculture at the points of depletion is an obvious one. * * * But its complexities are so vast that any solution on a national scale will be many months in coming. In the meantime, the problem will be more or less a local one. * * * These returned men will be without jobs. There is only one agency most obviously fitted to do this [provide jobs]. * * * That agency is the one which in the first place took them out of their jobs. * * * Every local board virtually now knows where every man came from and the opportunities which exist in his community for reemploying him. * * * No measure could be more popular to the responsible interests of this country than the one here mentioned. These boards include representatives of agriculture, banking, manufacturing, commerce, labor, and the professions. They possess the confidence of their own communities in an unexampled degree. To charge them with the proposed task would meet with unanimous popular approval." (National Archives. War Department, Files of Chief of Staff: Draft Boards.)

The Government had already made provision for family allotments, term insurance, Liberty Bond allotments, compensation for disability, etc., the carrying out of which would require months of administrative activity at the best. Delays were bound to occur as a result of the difficulties of handling official investigations through a central agency far removed from any intimate knowledge of the individual facts. As the Provost Marshal General saw it, it was "imperative to employ * * * an agency localized in each community to serve as the local intermediary between the Government and the soldier."

He also believed that the individual welfare of the soldier would be furthered by the adoption of this method:

> The returned soldier * * * has in all times been an element of unrest in the community. * * * [He] has just been freed from a rigid system of restraint; he is something of a licensed hero; and however young, he now thinks himself a veteran, and emancipated from control. There ought to be some central agency that is charged to look after him. That agency is the local board.

[13] There were 4,643 of these boards and, in addition, there were the district boards, all familiar with local and regional conditions.

* * * There will be an intense need in most communities, and for a large portion of the returned soldiers in all communities, of some sort of a controlling and supervising influence. This individual welfare of the returned soldier is not exactly his moral welfare, but it is something above and beyond his economic welfare. It is not easy to describe but it is a very real thing. (National Archives, War Department, Files of Chief of Staff: Draft Boards.)

The memorandum was forwarded to the Secretary of War and then on November 26 to the Director of Operations for review. It was too late, however, for this memorandum to be considered, as orders had already gone out on November 19 to begin demobilization from camps in the United States by organization or military unit, and the adoption of this traditional method had been announced by the Secretary of War and the Chief of Staff.

Among the several groups that were early supporters of the local-board plan was the Vice Chairman of the War Industries Board. In a memorandum to the Chairman of the Board he said that it was his impression that the military demobilization plan just announced by the War Department was "one of convenience for the Army rather than one calculated to meet the demands of industry." It was the declared policy of the War Industries Board to release materials to nonwar industries in order to stimulate peacetime activities. As this would be futile without a supply of skilled labor, the Vice Chairman proposed using the local draft boards in the demobilization of soldiers still within the United States, in accordance with "the evident needs of industry for the immediate future." He emphasized the need for skilled workers and recommended that such men "experienced in food, fuel, mining, or transportation industries," be furloughed, whether here or abroad, on certificate of need from war agencies such as the Food Administration, the Fuel Administration, and the Emergency Fleet Corporation. Furlough, rather than discharge, was proposed to insure that these men would be employed where their skills were most needed. Publicity of this plan was urged "to prevent dispersion and tend to reconstruct the nonwar industries to their former status. * * * A general plan of completing discharge of our whole Army at point of origination through local draft boards is favored." Throughout, the memorandum favored some constructive and expedient method of bringing the soldiers back to their places of pre-war employment and reflected a compromise with the plan for full demobilization by trade or occupation.

The members of the draft boards were, of course, in favor of local demobilization. Not only did the communities want their men to come home, but farmers and business and professional men could give employment to large numbers of returned soldiers in their localities.

That the proposal received wide publicity is evident from the flood of letters received by the War Department in its support after demobilization was in progress. These letters were forwarded to the Secretary of War from members of Congress; they came from governors and mayors, from State councils of defense, and from citizens' committees. It is probable that propaganda stimulated some of the letters, but they continued to come throughout the winter of 1919, as the problem of unemployment became increasingly acute.

There were legal technicalities which made it impossible for the War Department to provide for the discharged soldiers the type of

transportation which would insure their movement out of the cities. Legislation passed later only partially solved this difficulty. Then, too, it was stated that the proposal would prove both costly and inexpedient, that the necessary administrative details must be carried out at larger centers.

It was conceded that the use of the boards would get the men nearer their homes, but could not keep them there. "Whether the draft boards would succeed in placing men where they had come from and keeping them there is a matter of considerable doubt. It is believed, in view of the insistent demands that men be released from the camps where the work of demobilization is now concentrated and being done systematically by trained officers and men, that if the draft-board system were considered the largely increased personnel required by dispersing the same work * * * would result in a popular demand for the return to the system now being used." [14]

DEMOBILIZATION BY LENGTH OF SERVICE

The plan of demobilization in accordance with length of service, the system finally used by Great Britain, was considered by the General Staff and rejected for valid reasons. The United States had been at war a relatively short time. Most of the overseas troops had been abroad little more than 6 months. Almost 50 percent of the emergency Army was in camps in the United States, and some of these men had been in camp only a few weeks. Others, chiefly in the Services of Supply and other services needed for the administration of the camps, had served longer than many of the troops abroad.

DEMOBILIZATION BY MILITARY UNIT

As already noted, the traditional method of discharge by military organization was adopted and announced to the press by the Chief of Staff on November 16—5 days after the Armistice. This was just a month after the War Plans Division had been directed to develop plans for demobilization, and before the final formal report had been received by the Chief of Staff.

There can be no doubt that the plan of discharge by military organizations was considered by the military authorities as the method best adapted to the immediate problem. "The decision as to the essential principles under which our Army was to be demobilized was made by the Chief of Staff in person, who determined on demobilization by units. * * * He promptly and unerringly selected from the many plans proposed the one best suited to American conditions." [15] The chief claims made for this method were that it expedited discharge; that it insured the orderly return of troops, that large military units represented a cross section of American industrial life, and that because of its flexibility the rate of discharge could be controlled and provision could be made for special situations and individual cases. Under this method large units of men no longer needed could be discharged en masse. Other units needed at ports of debarkation, at convalescent centers and at cantonments, could be retained as a whole.

[14] National Archives. War Department, Files of Chief of Staff, Letter to the Executive Committee of the Independent Citizen's Committee of Welcome from the Chief of Operations, December 4, 1918.
[15] War Department. Files of General Staff, Lecture on Demobilization, January 28, 1921.

If carried to its logical conclusion it would prevent favoritism in release of certain classes, but it could also provide for the release of certain groups needed to support the civilian economy.

Demobilization was scarcely under way before complaints and requests for special treatment of individual or group cases began to pour into the War Department. The flood of discharged servicemen into the large industrial areas brought an avalanche of calls for modifications in the demobilization program. Most of the letters dealt with one of two problems—the danger to the community of too rapid demobilization, or the need for obtaining the prompt discharge of men needed in specific industries. These complaints and the tenor of the replies reflect the haste with which the reversal from mobilization to demobilization was undertaken and the desirability of a program from the outset which would have combined the best elements of the several policies proposed. The complaints mounted, most of them suggesting a modification of the system being used, in order to divert the discharged soldiers away from the large cities.

Many of the requests for action to ameliorate conditions came from Congressmen who were besieged by their constituents, sometimes from purely selfish motives, but more often in the interest of the community or of the servicemen themselves. The War Department found it difficult to answer these letters meticulously, to be consistent, and to defend the system and the results of its applications.

One of its replies contained a carefully worded statement of the efforts being made to overcome the "local shortcomings" of the operations in progress:

> Such organizations [of citizens] which find in the large cities a congregating of ex-soldiers and other persons without employment, have, it is believed, erroneously become convinced that this crowding to the larger cities is a fault of the War Department's system of demobilization, and that their proposed scheme of demobilization through the local draft boards would have prevented such crowding. It is believed that this opinion is entirely unjustified. Young men from the farms and rural communities have been taken from their secluded homes and isolated communities and have seen something of the world. The desire of such young men to go to large cities and seek the excitement and distraction there to be found is a fault of human nature that cannot be overcome by legislation or War Department regulation. The fact that discharged soldiers after their discharge go to the large cities is not a fault of the War Department demobilization but has occurred in spite of careful plans taken by the War Department to encourage soldiers to return to their homes.
>
> This phenomena [sic] of persons crowding to the large cities is not confined to the United States, but is occurring in every country that was in the war. At the completion of wars, the tendency has always been shown for soldiers returning from war to flock into the cities. * * *
>
> I have written at this length because I wished to make it clear that demobilization is proceeding in accordance with a very definite and considered policy, and the War Department feels certain that as time passes and the matter is more thoroughly understood and the facts become more completely known, the country will become convinced that the demobilization was conducted in an efficient and well-planned manner, to the best interests of the greatest number of people of the United States. (National Archives. War Department, Files of Chief of Staff; Letter to Head of the House Military Affairs Committee from Chief of Operations, February 25, 1919.)

Another reply to a Congressional inquiry contained this understanding paragraph:

> Demobilization is inevitably an unpopular process, * * * The eyes of soldiers are turned from contemplation of the country's enemy to provision for their own future, and no man with human sympathies can fail to be moved in their behalf.

But for the public official entrusted with the completion of the undertaking it is a time for self-restraint and broad vision, a time to see the larger aspect steadily and to see it whole. (National Archives. War Department, Files of Chief of Staff: Letter to Senator McKellar from Secretary of War, February 3, 1919.)

During the winter of 1919 the country was faced with a situation which necessitated many modifications of the original procedures for demobilization by military units. Finally, in March 1919, the War Department published an official statement, entitled "The Army Demobilization System Reviewed and Analyzed in Order Better to Acquaint the Public with the Many Difficult Problems Arising."[16]

At that time the country was suffering from an unemployment crisis, resulting from the cancelation of war contracts for goods of no peacetime value. The analysis of the demobilization situation attempted to explain the abrupt discharge of thousands of servicemen in the absence of a well-planned program for their reemployment, in view of the acute industrial situation. This detailed statement is, in the main, a reply to the persistent demand for the use of the draft boards for final discharge of the men. That such a necessity should have arisen leads to the conclusion that from the beginning a system of demobilization could have been used which would have incorporated the most desirable portions of each proposal. A part of this statement is a fitting conclusion to this review of the various plans proposed for demobilization of the soldiers, any one of which would have failed in some degree because of the unexpected Armistice and the delayed preparations for readjustment.

This, then, is the tremendous problem that confronts us—to return to a country whose digestion for labor is not now of the best, hundreds of thousands of men without employment, not forgetting that they and their families deserve the grateful thanks of the Nation, and remaining keenly aware that their patriotism and sacrifice demand that they be given every possible recognition and favor.

As the welfare of the country demanded our entry into the war, and its vigorous prosecution regardless of sacrifices, so does it seem that the welfare of the country at large demands our first consideration in the matter of demobilization. The absorption by the country of these returning men without disorder and without upsetting the economic life of the Nation becomes of paramount importance. The question arises—can the country digest these men best if fed into it in large contingents by discharge in certain restricted areas such as the ports of the Atlantic seaboard, or in small groups, distributed throughout the entire country in such a way that the processes of assimilation can work easily on each small group?

The administration of demobilization of the soldiers is a separate story and its results must be integrated with the coordinate problem of the release of thousands of industrial workers.

[16] U. S. Official Bulletin (Washington), March 24, 1919 (p. 6).

Productivity of Labor and Industry

Productivity in Agriculture, 1909–42 [1]

Summary

THE volume of agricultural production in 1942 was the highest on record, 16 percent greater than the 1939 output and 54 percent above the 1909 production level. This record-breaking output was achieved with a labor force 3 percent smaller than that engaged in 1939 and 15 percent smaller than that of 1909. Output per worker increased about 80 percent from 1909 to 1942 and 20 percent from 1939 to 1942. Preliminary figures indicate that total production in 1943 was about the same as in 1942; farm employment was slightly lower.

All major farming areas have participated in the gains in production and output per worker. Between 1939 and 1942, by far the largest advance occurred in the Small Grain Area (Kansas, Montana, Nebraska, North Dakota, and South Dakota), where production increased 63 percent and output per worker 61 percent. Substantial gains were also made in the Western Cotton Area, the Range Area, and the Western Dairy Area.

The gradual rise in output per worker during the period 1909–42 is attributable to the progress of mechanization and to other types of improvement of farm practices. In short periods, production and output per worker have fluctuated considerably. These fluctuations reflect variations in average yields resulting from changing weather conditions. Thus, the advance in productivity between 1939 and 1942 is due in part to high crop yields achieved in 1942.

Output per worker, rather than output per man-hour, is used here as the measure of productivity, because complete and adequate data are not available for the man-hours worked in agriculture. It appears, however, that farmers and farm laborers worked longer hours in 1942 than in 1939; a part of the increase in output per worker between the 2 years represents, therefore, an increase in average hours per worker.

Agricultural Production, Employment, and Productivity [2]

Agricultural production in the United States as a whole advanced about 54 percent between 1909 and 1942 (table 1). The first period of sustained increase in production was the interval 1921–26, when production rose 25 percent. Output climbed steadily from year to year in this period and in 1926 was almost as high as in 1939. No substantial changes occurred from 1926 to 1931; between the latter year and 1934, the production index dropped about 25 percent, as a consequence of drought and of acreage restrictions under the AAA.

[1] Prepared in the Bureau's Division of Productivity and Technological Development by Celia Star Gody; the indexes were compiled by Loretta M. Walsh under her direction.

[2] Details of the procedures used in the construction of the indexes of production, employment, and productivity are shown in a mimeographed report, Productivity in Agriculture, 1909–1942, which may be obtained, on request, from the Bureau of Labor Statistics.

The second substantial gain in output took place after 1934. Production rose 38 percent from the low mark of that year to reach a new record in 1937. The 1942 output was 9 percent above the level reached in 1937 and 16 percent above that attained in 1939. Of course, production has fluctuated considerably from year to year over the entire period, owing to changing weather conditions.

TABLE 1.—*Indexes of Production, Employment, and Output Per Worker in Agriculture in the United States, 1909–42* [1]

Year	Indexes (1939=100) of—			Year	Indexes (1939=100) of—		
	Production	Employment	Output per worker		Production	Employment	Output per worker
1909	75.4	113.7	66.3	1926	98.0	107.4	91.2
1910	79.2	113.1	70.0	1927	92.4	104.7	88.3
1911	82.0	112.1	73.1	1928	97.1	105.9	91.7
1912	86.7	112.1	77.3	1929	96.2	105.1	91.5
1913	81.1	112.0	72.4	1930	93.3	104.0	89.7
1914	88.6	111.7	79.3	1931	102.8	103.9	98.9
1915	85.8	111.6	76.9	1932	96.2	103.1	93.3
1916	82.0	111.9	73.3	1933	91.4	102.6	89.1
1917	85.8	109.8	78.1	1934	77.3	101.0	76.5
1918	85.8	105.7	81.2	1935	90.5	103.6	87.4
1919	83.9	103.4	81.1	1936	83.9	102.9	81.5
1920	91.4	105.8	86.4	1937	106.6	101.4	105.1
1921	78.2	106.3	73.6	1938	98.2	100.5	97.7
1922	84.8	106.5	79.6	1939	100.0	100.0	100.0
1923	86.7	106.0	81.8	1940	101.8	98.6	103.2
1924	88.6	105.8	83.7	1941	103.6	96.5	107.4
1925	94.3	106.6	88.5	1942	115.8	96.8	119.6

[1] The indexes of production, employment, and productivity are extensions of measures developed by the National Research Project of the Work Projects Administration in the course of its studies of changing techniques and employment in agriculture—Trends in Size and Production of the Aggregate Farm Enterprise, 1909-36, by R. G. Bressler, Jr., and J. A. Hopkins, Report No. A-6 (1938) and Trends in Employment in Agriculture, 1909–36, by E. E. Shaw and J. A. Hopkins, Report No. A-8 (1938). The National Research Project indexes, which were computed on the base 1924–29=100, have been linked to indexes prepared by the Bureau of Labor Statistics for 1935–42, on the base 1939=100. The procedures used in the derivation of the indexes for 1935–42 were similar to those used for the earlier years.

The index of production was derived from series for gross farm output, combined with weights representing the estimated labor requirements per unit of gross output. It should be noted that, because of differences in concepts and methods, the production index differs somewhat from other published measures, such as the Bureau of Foreign and Domestic Commerce–Bureau of Agricultural Economics monthly index of the volume of agricultural marketings, the Bureau of Agricultural Economics index of the volume of agricultural production for sale and home consumption, and the National Bureau of Economic Research index of net agricultural output for 1899–1939.

The index of employment is based on extensions of the National Research Project estimates which are published by the Bureau of Agricultural Economics.

Between 1939 and 1942, production increased for all the major commodity groups except tobacco. The largest gains are shown for oil-bearing crops (96 percent), food grains (33 percent), and feed grains (25 percent). Substantial advances also occurred in the output of meat animals, poultry, and vegetables; small increases (12 percent or less) are recorded for milk, sugar crops, cotton, wool, and fruits and nuts. Tobacco production fell 25 percent from 1939 to 1942.

The amount of labor devoted to agriculture cannot be accurately determined, since members of the farm family assist with farm work when necessary and farm proprietors may work away from the farm part of the time. The employment index presented in table 1 is based on annual averages of monthly estimates of the number of persons engaged in farm work for 2 or more days a week. The estimates include proprietors, family workers (regardless of age), and hired workers.

Employment has tended downward throughout the period considered, and declined about 15 percent between 1909 and 1942. In general, changes from year to year have been small. During the period of World War I (1916 to 1919), however, employment declined about 8 percent, as a consequence of the acute labor shortage. During the present war, the decline has been no greater than that witnessed in previous years, i. e., 3 percent between 1939 and 1942. Of course, there was only a slight rise in production from 1916 to 1919; the increase between 1939 and 1942, on the other hand, has been substantial. No estimates of man-hours are available for the entire period, but since June 1941 the Bureau of the Census has collected data, on a sample basis, for average weekly hours. These statistics indicate that the shortage of farm labor has been compensated to some extent by longer working hours. Hours per week during June–December 1942 averaged 9 percent, or 4.8 hours, above the figures for the corresponding months in 1941.

Since employment has changed only slowly, the index of output per worker has moved in close accord with the index of production from year to year. Output per worker rose about 80 percent between 1909 and 1942 and 20 percent between 1939 and 1942.

Production, Employment, and Productivity in the Various Farming Areas

Indexes of production, employment, and productivity for the major farming areas are shown in table 2 for the period 1935–42. In virtually all the areas, production and productivity have risen during this interval. From 1939 to 1942, the greatest advance is shown for the Small Grain Area, where production rose 63 percent, employment only 1 percent, and output per worker 61 percent between the 2 years. In the Western Cotton Area, the 1942 output was 18 percent above the 1939 level, although employment was 5 percent lower than in the earlier year. Other regions in which productivity increased substantially during this period were the Range Area, the Western Dairy Area, and the Delta Cotton Area. Indeed, in only one area—California—was there no gain in output per worker between 1939 and 1942. In that State, a 4-percent rise in production between 1939 and 1942 was accompanied by an equal rise in employment.

TABLE 2.—*Indexes of Production, Employment, and Output per Worker, by Farming Areas, 1935–42* [1]

Year	Indexes (1939=100)											
	Production	Employment	Output per worker	Production	Employment	Output per worker	Production	Employment	Output per worker	Production	Employment	Output per worker
	Corn Area			Eastern Cotton Area			Eastern Dairy Area			Delta Cotton Area		
1935	88.1	103.2	85.4	105.5	106.7	98.9	96.5	97.0	99.5	80.2	104.2	77.0
1936	76.6	101.6	75.4	104.9	105.1	99.8	92.2	96.5	95.5	99.3	103.6	95.8
1937	96.9	101.0	95.9	129.1	102.4	126.1	100.1	96.6	103.6	131.0	104.7	125.1
1938	95.2	101.6	93.7	107.3	99.2	108.2	98.8	98.4	100.4	104.0	101.5	102.5
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	97.8	101.5	96.4	105.7	96.1	110.0	100.6	99.5	101.1	93.4	99.7	93.7
1941	104.4	99.3	105.1	91.3	92.4	98.8	102.2	96.9	105.5	97.1	97.8	99.3
1942	114.1	100.0	114.1	104.5	95.3	109.7	109.2	98.0	111.4	111.8	94.7	118.1

TABLE 2.—*Indexes of Production, Employment, and Output per Worker, by Farming Areas, 1935–42* [1]—Continued

Year	Indexes (1939=100)											
	Production	Employment	Output per worker	Production	Employment	Output per worker	Production	Employment	Output per worker	Production	Employment	Output per worker
	Western Dairy Area			Western Cotton Area			Small Grain Area			Northwestern Area		
1935	90.6	105.5	85.9	98.5	101.2	97.3	163.2	105.7	97.6	94.8	94.8	100.0
1936	79.8	105.6	75.6	87.8	101.4	86.6	73.2	103.8	70.5	95.0	96.4	98.5
1937	93.1	102.6	90.7	126.7	99.9	126.8	89.0	98.9	90.0	98.7	93.8	105.2
1938	95.7	102.2	93.6	105.5	98.9	106.7	104.0	99.0	105.1	101.2	95.8	105.6
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	104.0	98.6	105.5	115.4	96.1	120.1	113.0	99.6	113.5	103.5	99.7	103.8
1941	105.0	97.1	108.1	107.4	93.8	114.5	133.8	93.2	143.6	109.9	99.0	111.0
1942	115.1	96.9	118.8	117.6	95.1	123.7	162.8	101.0	161.2	111.2	101.0	110.1
	Middle Eastern Area			California			Range Area					
1935	89.2	107.0	83.4	86.0	94.9	90.6	90.3	106.7	84.6			
1936	82.7	105.5	78.4	88.1	95.2	92.5	95.2	109.2	87.2			
1937	102.8	103.6	99.2	103.9	99.7	104.2	104.1	106.0	98.2			
1938	92.1	102.9	89.5	97.3	99.4	97.9	104.1	101.4	102.7			
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			
1940	97.6	91.7	98.9	101.9	97.6	104.4	106.8	96.8	110.3			
1941	95.2	94.3	101.0	102.0	100.6	101.4	118.1	100.4	117.6			
1942	105.8	93.6	113.0	103.7	103.6	100.1	120.9	100.4	120.4			

[1] See footnote to table 1.

The States included in each area are as follows: *Corn Area.*—Illinois, Indiana, Iowa, Ohio. *Eastern Dairy Area.*—Connecticut, Massachusetts, New Hampshire, New York, Pennsylvania, Vermont. *Western Dairy Area.*—Michigan, Minnesota, Wisconsin. *Eastern Cotton Area.*—Alabama, Georgia, South Carolina. *Delta Cotton Area.*—Arkansas, Louisiana, Mississippi. *Western Cotton Area.*—Oklahoma, Texas. *Small Grain Area.*—Kansas, Montana, Nebraska, North Dakota, South Dakota. *Middle Eastern Area.*—Kentucky, Maryland, North Carolina, Tennessee, Virginia, West Virginia. *Range Area.*—Arizona, Colorado, Nevada, New Mexico, Utah, Wyoming. *Northwestern Area.*—Idaho, Oregon, Washington.

Factors Affecting Productivity

The long-term advance in productivity is attributable to increased mechanization of agricultural operations, improvements in the uses of land, the production of superior varieties of crops and livestock, greater application of the principles of animal nutrition, more effective pest control, and similar developments.[3]

MECHANIZATION

The most important influence has been the increased use of the tractor. Adoption of the tractor was speeded by the labor shortage which existed during and following World War I. According to estimates prepared by the Bureau of Agricultural Economics, there were about 85,000 tractors on farms at the beginning of 1918; by 1921 there were 343,000. Thereafter, as improved models were developed, the number advanced steadily. At the beginning of 1943, there were about 1,906,000 tractors on farms in the United States. Significant improvements made since the gasoline tractor was first introduced include the development of all-purpose machines, reduction in size and price, and the use of rubber tires.

[3] See Technology on the Farm, U. S. Department of Agriculture (1940); American Agriculture, 1899–1939, by H. Barger and H. H. Landsberg, National Bureau of Economic Research, Inc. (1942); Changing Technology and Employment in Agriculture, by J. A. Hopkins, U. S. Department of Agriculture and Work Projects Administration National Research Project (1941).

The tractor made possible the use of improved machinery for tillage and harvesting, as well as an increase in the speed at which such machinery was operated. It also permitted the combination of several operations into one—for example, seedbed preparation, fertilizer distribution, and planting. In harvesting operations, which require a substantial proportion of total labor, labor requirements per unit of output have been reduced by more general use of the harvester-thresher. The introduction of "baby" and "midget" combines permitted profitable use of such equipment on small farms.

Despite the progress of mechanization, numbers of crops still require large amounts of hand labor. Cotton is, of course, the most important of these. The Rust cotton picker, introduced several years ago, is used to some extent in Arizona and New Mexico, but has not been found entirely satisfactory in the Mississippi Valley. Cotton picked by existing machines, moreover, contains some leaves and other refuse and is, therefore, of lower grade than that picked by hand.

A year ago, a large machinery company announced that it had perfected a picker suitable for use in the major cotton-growing regions of the country. The company recently applied to the War Production Board for approval of the construction of a plant to produce the picker on a commercial basis. The new picker has two drums, each containing a series of vertical shafts. On the shafts are revolving spindles which enter the cotton plants, open the bolls, and spin the cotton out, without disturbing the unopened bolls. The cotton fleece is removed from the spindles by rubber strippers or doffers, then conveyed by vacuum to a separating chamber and then by air pressure to a large wire-netting basket. The machine is operated by one man and must be mounted on a medium-size tractor. The company states that the new machine will pick as much cotton in a day as 50 to 60 hand pickers in the same field.[4]

The sugar-beet crop, too, has required a large amount of hand labor for blocking and thinning as well as for harvesting. Recently, progress has been made in developing mechanical equipment. By cooperative work of the University of California and the U. S. Department of Agriculture, a beet-seed shearer was produced which breaks up the seed clusters into single seeds and makes the thinning operation much easier. Several thinning machines have also been introduced. One of these, an adaptation of a machine previously used in the cotton belt, is said to thin an acre in 2½ hours, instead of the 27 hours formerly required. A new beet harvester which is in use tops the beets, lifts them out of the ground, and deposits them in windrows or trucks.[5]

Corn pickers have been in some use on large farms for a number of years. It has been estimated that yields of 60 to 70 bushels an acre can be harvested with 1½ to 2 man-hours of labor per acre if 2-row corn pickers and modern equipment for hauling and cribbing are employed. About 9 man-hours are required for a 70-bushel yield by hand picking and scooping. A new type of corn picker, announced in 1941, combines gathering, snapping, and husking operations in the same pair of rollers. Another machine shells the corn in the field, a practice which minimizes damage to the kernels.[6]

[4] Business Week, November 27, 1943; Farm Implement News, December 10, 1942; Steel, November 30, 1942.
[5] Farm Implement News, June 10, 1943; Business Week, May 2, 1942, September 19, 1942.
[6] Technology on the Farm; Farm Machinery and Equipment, August 1941, December 1941.

Labor requirements in handling hay have been reduced by the introduction of two types of machines. One is a continuous-feed, blockless pick-up baler which packs ready-sliced hay; the other chops grass silage into short lengths and compresses windrowed straw or hay into approximately as little space as baled hay. A portable hay dehydrator has also been developed recently.[7]

FARM PRACTICES

A more general appreciation of the consequences of soil erosion and depletion has led to the development and application of practices which prevent soil losses and which increase or maintain crop yields. These soil-conservation measures include crop rotation, terracing (the use of ridges to conserve moisture and regulate water run-off), contour farming (farming around hills in bands), strip cropping (the use of alternate strips of erosion-resisting and other crops), and the use of cover crops which are returned to the soil as green manure.

One recent development which has aroused considerable interest and some controversy is subsurface tillage with the use of a mulch. Crop residues, such as wheat stubble and straw, are left on the surface instead of being plowed under, and the soil is worked several inches below the surface. Stubble-mulching is used together with other conservation measures—strip cropping, terracing, crop rotation, and cover crops. In experiments conducted jointly by the U. S. Soil Conservation Service and the University of Nebraska, it was found that bare soil was compacted by heavy rainfall, so that moisture penetration was slow. The protection of the soil surface with crop residues greatly increased the absorption of water. Subsurface tillage also helped to control erosion, reduce weed growth, and improve soil structure. Yields substantially greater than those obtained by customary methods of tillage were produced. Stubble-mulching has been applied successfully fairly extensively in the grain fields of the Pacific Northwest and the Great Plains. Some observers, however, doubt whether these methods are equally satisfactory for other sections of the country. Subsurface tillage makes necessary the use of special equipment which loosens the soil without burying the residue, and modifications are also necessary in planting equipment. New equipment has already been designed; existing equipment with slight modifications performs some operations satisfactorily.[8]

The development of new, superior plant varieties has helped to increase yields or to counteract tendencies toward decline. Most important has been the introduction of hybrid corn, which gives greater yields and has greater "standability"; some varieties are resistant to disease and have immunity to insects. New and improved varieties of wheat, oats, and soybeans have also been developed. Increased knowledge of the soil elements necessary for plant growth and improved methods of pest control have permitted reduction in damage to growing crops.[9]

Research into plant hormones has created compounds which may be used, by spraying, dusting, or soaking, to improve yields or to produce improved plant varieties. Plant hormones are used to propa-

[7] Farm Machinery and Equipment, July 1940; Farm Implement News, January 23, 1941, November 25, 1943.

[8] Using Crop Residues for Soil Defense, U. S. Department of Agriculture, Miscellaneous Publication No. 494 (August 1942); Stubble-Mulch Farming for Soil Defense, U. S. Department of Agriculture, Farmers' Bulletin No. 1917 (December 1942).

[9] Technology on the Farm.

gate plants from cuttings, to prevent the preharvest falling of apples, to produce seedless fruit (e. g., tomatoes), and to inhibit buds, especially of potato tubers.[10]

Labor requirements in the production of livestock and livestock products have been reduced by the use of feed supplements, and by campaigns to eradicate disease. Progeny testing and the use of improved breeding practices have also made progress during the period considered.

WARTIME PROBLEMS

Since the war began, problems of obtaining sufficient equipment and labor to produce the record-breaking quantities of agricultural products required have presented serious difficulties. The early restrictions on the manufacture of agricultural machinery have, however, been eased considerably. During the year beginning July 1, 1943, such machinery can be produced at a level averaging 80 percent of 1940 output, compared with 40 percent for the previous year. No restrictions are placed on the manufacture of repair parts. Increased emphasis has also been given to the pooling and renting of equipment.

The deferment of agricultural workers from the draft has placed agriculture in a position more favorable than that of many other industries with regard to labor supply. Nevertheless, the indications are that farmers have had to work longer hours since the war began. In addition, larger numbers of women are now engaged in farm work (exclusive of housework) than in peacetime. Estimates prepared by the Bureau of the Census indicate that in June 1940 about 1.5 million women were engaged in farm work; in June 1942 there were 2.1 million. During 1943, the number of women in agricultural employment has been even higher than in 1942.

Outlook for Agriculture

When peace returns, new progress will doubtless be made in the mechanization of agricultural tasks. Such progress will be favored if there are abundant employment opportunities, if wage rates for farm labor are high, and if the demand for agricultural products is sustained. Of course, if crop production is extended to less-productive lands or if land now in use deteriorates because adequate conservation measures are not employed, there will be counteracting forces toward decreased productivity.

It is likely that surplus farm products will be used increasingly as raw material for industry. Milk, for example, may be used to manufacture casein, which is used in plastics, glue, and fiber. A plastic has been made from sugarcane bagasse, a waste product. A plastic called Ethocel can be produced from agricultural products: cellulose from cotton or wood pulp and the ethyl radical from alcohol. Wheat and corn may be used for the production of alcohol. Cornstalks, corncobs, oat hulls, cottonseed hulls, peanut hulls, and various straws and stalks can be used in the manufacture of cellulose nitrate, cellulose acetate, and cellulose derivatives.[11]

[10] Chemical and Metallurgical Engineering, October 1942; Industrial and Engineering Chemistry, May 1943.

[11] Farm Machinery and Equipment, March 1941; Modern Plastics, December 1941.

Rationalization of Work in German Industry[1]

RATIONALIZATION of work in Germany concerns that country's efforts to increase industrial production by the adoption of more efficient shop methods and machinery as well as by better utilization of labor. A German economist claims that "rational production depends not on the size of a factory or plant, but on the technical and economic ability of men who possess a knowledge of details, who can visualize the general situation, and who have the creative ability coupled with the energy and determination to reorganize a new process of production in a revolutionary way." Such men, he states, are as significant for industrial production as great inventors are, for they alone are in a position to effect an expanded production.

Viewed against the background of this statement, the organization of labor for Germany's war effort constitutes one of the main tasks of rationalization, not to mention the importance of increased mechanization and improvement of the standardized methods of production.

Increases in Productivity

Improved machinery methods are said to have greatly increased the efficiency of the workers in Germany. Thus, a worker's ordinary efficiency is increased sixfold by use of a single-spindle automatic lathe and as much as fourteenfold on a multiple-spindle lathe. In turning out a minor flywheel, the time required for the process at present is 11 minutes on a turret lathe and 1 minute on a multiple-spindle lathe. Previously, using an ordinary lathe, a workman took 50 minutes for the operation. Wage expenditures for the production of 100 fly wheels in the above-described processes of manufacture have decreased from RM.112.50[2] in the 50-minute process to RM.22 in the 11-minute process and RM.2 in the 1-minute process.

It has been calculated that the replacement of radial drilling machines by combined machinery with several drives, e. g., with a bore-drive and a lift- and worm-drive (*Gewindestrasse*), would reduce the number of required machines, without a reduction in production capacity, from 291 to 8, the costs from RM.3,140,000 to RM.406,000, and the necessary factory floor space from 1,690 to 110 square meters.[3] A factory which undertook a replacement of this kind, and installed four combined machines, reported a saving of 1,132 skilled and specialized workers, who would have accounted for as many as 1,860,000 working hours; and a further saving, in machinery and equipment, of 6,650 square meters in factory floor space, of RM.1,090,000 in investment capital, and of 5,987 metric tons[4] in material.

Standardization of Machinery

The results thus far accomplished in rationalization in Germany were recently released. According to these data, the total number of 437 various types of lathes, planing, cutting and similar machinery has been reduced by 65 percent—to 265 standard units. Of a total of 884 types of compressing, cutting, and similar machines, 530

[1] Data are from a report (No. 2415) from the United States Legation at Stockholm, November 8, 1943.
[2] Average exchange rate of reichsmark in 1942 was 39.96 cents.
[3] A square meter is equivalent to 10.76 square feet.
[4] A metric ton is equivalent to 2,204.6 pounds.

(60 percent) have been eliminated. The 136 various types of building machinery have been reduced to standard types comprising 97 units, a reduction of 71 percent. In the case of 82 types of pumping and lifting machines, the reduction is 69 percent. Of the 1,088 various types of agricultural machines, 875 have been eliminated, a reduction of more than 80 percent. The standardization of all machine-tool equipment has effected a reduction of the previously existing types of from 75 to 91 percent.

The total number of types of machinery in Germany has been reduced from 3,637 to 1,011 standardized types. All the remaining types have been simplified and their production has been transferred to the standardized plants.

Mechanical and Other Problems

Most of the German war and auxiliary industries are operated according to the so-called conveyor-belt or assembly-plant system, in which mass production of machinery parts is distributed among a large number of small or medium-sized factories throughout the country, and final assembly takes place at a few large plants in important centers. Millions of laborers are organized accordingly. This process of organization and training coincides with the German practice of control from above. For purposes of coordination, many medium-sized factories have been compelled to specialize their production to such a degree that they would be valueless for immediate peacetime uses. Moreover, the machinery and equipment of the closed factories have been removed to centers which serve the war effort exclusively.

The increasing concentration and rationalization of industry have certain other disadvantages. For example, the increased reliance on new methods requires a large number of special machines that formerly could have been supplied by the thousands of small factories manufacturing machine tools, which possessed considerable experience and adaptability to new technical situations. However, more than 80 percent of these plants have been closed down, and a shortage of special machines can therefore be expected, as new construction bureaus or experimental plants can hardly meet the need for new developments.

The Labor Factor

The system of rationalized production has unquestionably increased the general efficiency of Germany's war industries, as contrasted with a few years ago. Any further increase depends not on technical and organizational ability alone but also on the extent to which the workers can be adapted to fundamental reorganizational changes. The highly mechanized methods of production require a thorough adjustment of labor to the new tasks. Efforts made in this direction in Germany appear to be encountering some difficulty. The Germans declare that the top-speed performance which is demanded of war industries and other industries makes it necessary to limit the personal liberty of the worker. Furthermore, the shortage of skilled laborers makes it important for the factories to have the right man employed in the right place, where he can be of greatest possible use. Thus, skilled men are employed in the capacity of supervisors, con-

trollers, and testers. The importance of psychological factors is always emphasized when the position for the right man is to be decided. With reference to female labor it is stated that "it must not be forgotten that the main duties of women—to be mothers and housewives—should not be endangered."

The ingenuity which the Germans exercise in their regimentation is indicated by the recent publication of a "Pocket Manual for the Promotion of Inventions," issued by the Chief Office of Technology of the Nazi Party, the German Labor Front, and the Reich Chamber for Economics. Experience has shown, it points out, that it is not always a simple matter to make adjustments between a manufacturer and an inventor. Hence, it was deemed necessary to regulate the rights of the inventor. Accordingly, an order was issued on March 20, 1943, supplementing a previous regulation of July 12, 1942. As the result of this measure, custodians of inventions (*Erfinder-Betreuer*) have been appointed to more than 16,000 factories, where they perform the duties prescribed in the pocket manual.

Industrial Relations

Work of National Mediation Board, 1942–43[1]

ALTHOUGH the number of labor disputes on the railroads and airlines increased during the year ending June 30, 1943, only a few involved work stoppages and these were small strikes not authorized by their labor organizations. The large majority of disputes were settled peacefully in accordance with the procedures provided by the Railway Labor Act, and there was no serious strike or lockout to interrupt transportation during the entire year. Of the 425 cases which the Board disposed of during the year, 235, or 55 percent, were disputes involving changes in rates of pay, rules, or working conditions, and 190, or 45 percent, were representation disputes. In addition, 2,900 cases requiring interpretation of agreements were disposed of by the National Railroad Adjustment Board, which has jurisdiction over such disputes.

In 8 disputes in which the Mediation Board was unable to effect an amicable settlement by mediation, the parties concerned voluntarily agreed to accept arbitration. Eight other disputes were referred to Emergency Boards appointed from the National Railway Labor Panel. The most important of these cases was that of the million nonoperating employees on the main railroads of the country who requested an increase of 20 cents an hour in basic wage rates, a minimum hourly rate of 70 cents, and the establishment of a union shop. The Emergency Board denied the union shop and recommended an increase of 8 cents per hour in basic rates When the Director of Economic Stabilization substituted for this increase, sliding-scale increases ranging from 4 to 10 cents per hour, the labor organizations representing the employees protested and a strike was seriously threatened. In January 1944, through Presidential intervention, a settlement was reached which provided sliding-scale increases of 9 to 11 cents an hour.[2]

In the representation disputes referred to the National Mediation Board during the year, 232 different crafts or classes of employees were involved. Of the total 190 representation cases, 78 involved "operating" crafts or classes of employees. A large majority (125) of the representation cases were disputes between national labor organizations and system associations (company unions) or unorganized employees. The remainder (65) were interunion disputes.

[1] Data are from Ninth Annual Report of the National Mediation Board, which reviews the operation of the 17-year-old Railway Labor Act, adopted in 1926. Amendments to the act in 1934 created the National Mediation Board, and another amendment in 1936 extended the jurisdiction of the act to include air transportation.

[2] For an account of these cases, as well as a discussion of the wage structure in the railroad industry, see page 611 of this issue.

Crafts and Employees Involved in Representation Cases, Year Ending June 30, 1943 [1]

Types of disputes	Number of—		Employees involved	
	Cases	Crafts	Number	Percent
Total, all types	190	232	31,009	100
Total national organizations versus system associations or unorganized employees	125	162	15,874	51
National organizations versus system associations	21	31	10,284	33
National organizations versus unorganized employees	102	129	5,586	18
System associations versus unorganized employees	2	2	4	(2)
Total interunion disputes	65	70	15,135	49
National organizations versus national organizations	58	62	14,263	46
National organizations versus local unions	7	8	872	3

[1] Adapted from table 7 in annual report of National Mediation Board.
[2] Less than half of 1 percent.

Wartime Regulation of Industrial Relations in Canada [1]

STRIKE controls have been extended in Canada during the war period; and on December 9, 1943, all strike activity was banned which had the object of forcing an increase in wages, obtaining an alteration in terms of employment which would either directly or indirectly increase pay, or influencing a war labor board in making a "direction." To assist in peaceful settlement of existing differences, public machinery for conciliation and investigation was strengthened and additional facilities were created. The development of wartime regulations is outlined in the present summary.

General Background

Governmental facilities for conciliation were consolidated under the terms of the Conciliation and Labor Act in 1906. Responsibility for attempting to settle differences between employers and employees, at the request of either party, was given to the Labor Department. The following year the Industrial Disputes Investigation Act established a procedure for avoiding work stoppages in vital industries. A tripartite Board of Conciliation and Investigation was empowered to investigate a dispute, and a strike or lockout was prohibited pending the report and issuance of recommendations on the case. Coverage was limited to disputes involving employers of 10 or more workmen engaged in the operation of mines, railways, shipping, telegraphs, and other agencies of transport or communication, and of gas, electric-power, and water works.

The steady increase in industrial activity to fill wartime requirements led to a rise in industrial disputes and also to a greater volume of applications for boards of conciliation and investigation of differences, as is shown in the accompanying table giving statistics of strike activity and applications for boards. Owing to these wartime changes, existing machinery was inadequate both as to staff of conciliators and coverage of the disputes which might be dealt with under the provisions for public investigation.

[1] Data are from Canada, Department of Labor, Wartime Orders in Council Affecting Labor, Revised Edition, June 1943; Wartime Work of the Department of Labor, issued as a supplement to the Labor Gazette, November 1943; Labor Gazette, July and December 1943; Privy Council, Orders Nos. 8021 and 9384 of 1943; and various issues of Monthly Labor Review.

Applications for Action on Disputes, and Strike Activity in Canada, 1935–43

Year	Number of—			
	Applications for boards of conciliation and investigation	Strikes	Workers involved in strikes	Man-days of idleness, owing to strikes
1935	23	120	33,269	284,630
1936	23	156	34,812	276,167
1937	24	278	71,905	695,382
1938	33	147	20,395	148,670
1939	44	122	41,038	224,300
1940	66	168	60,619	206,210
1941	143	231	87,091	423,914
1942	106	354	113,916	450,222
1943	[1] 110	[2] 448	[2] 201,036	[2] 962,400

[1] First 7 months of year only.
[2] First 11 months of year only.

Agencies Handling Disputes

Conciliation and investigation staff.—Plans were formulated late in 1940 to reorganize and centralize the mediation services of the Department of Labor under a Director of Industrial Relations. The actual consolidation occurred in August 1942, when the conciliation service, which had been under the direction of a chief conciliation officer at Ottawa, and the administration of the Industrial Disputes Investigation Act, which had been under the Assistant Deputy Minister of Labor, were centralized under the Director of Industrial Relations and Registrar of Boards of Conciliation and Investigation. Thus, a saving in time was effected and a consistent policy was applied in handling disputes.

The number of conciliation officers attached to the Department of Labor was raised from 7 to 21. Formerly the conciliation staff operated from Ottawa and from local offices in Montreal, Toronto, and Vancouver; now, offices are also maintained in Fredericton and Winnipeg in order to deal more effectively with disputes in these areas.

In addition, by order (P. C. 4020) dated June 6, 1941, the appointment of industrial disputes inquiry commissioners was authorized, to make preliminary investigations of disputes with a view to bringing about prompt settlement. If the commissioners fail, they may recommend establishment of a board. Commissioners are usually selected from among judges, lawyers, professors, or other specialists. Service rendered by the professional groups has enabled the Department to meet personnel requirements without creating a much larger full-time staff. Industrial-relations officers often are given the powers of industrial disputes inquiry commissioners. One full-time commissioner has also been added to the staff of the Department of Labor.

National War Labor Board.—A specially established body—the National War Labor Board—has been given all the powers and authority of a commissioner appointed under the provisions of the Inquiries Act as well as other special duties and functions. The Board is responsible for wage control, including the supervision, direction, and control of the work of the regional boards constituted by the same order, and performs such other duties as may be assigned

by the Governor in Council or by the Minister of Labor. Other duties mentioned are the investigation of wage conditions and labor relations in Canada. Membership in the Board, as reconstituted by the terms of the Wartime Wages Control Order of December 9, 1943 (P. C. 9384), was enlarged from three to six persons, one of whom is chairman and another vice chairman. Of the remaining four members, two are chosen from the public, one from employers, and the other from employees. Three members of the Board constitute a quorum and decisions are made by a majority of the persons present at a hearing; in the event of a tie, the chairman, or in his absence the vice chairman, has the deciding vote.

A regional board operates in each of the nine Provinces. Duties are assigned to the regional boards by the National War Labor Board and the latter body has the right to vary or revoke any decision or direction made by a regional board, either on its own initiative or upon appeal from a person interested in or affected by the decision or direction.

Strike Restrictions, 1940–43

The first important war order in council limiting strikes and promoting peaceful settlement of industrial disputes was promulgated on November 7, 1939 (P. C. 3495). Disputes between employers and employees engaged in the production of supplies and munitions of war were made subject to the terms of the Industrial Disputes Investigation Act, thereby removing them from Provincial jurisdiction. The effect of the order was to provide for a "cooling off" period before any such workers could go on strike. (As stated above, the Industrial Disputes Investigation Act prohibits a strike or lockout pending a report and issuance of recommendations on a case.)

Direct action was further restricted when, by an order in council (P. C. 7307) dated September 16, 1941, a stoppage became unlawful even after a Board reported on a case, unless a vote requested by the employees and conducted by authority of the Department of Labor showed that a majority of the workers affected by the dispute favored a strike. According to a publication of the Canadian Department of Labor, this restriction was adopted as a solution to the problem raised by long-standing disputes which had been submitted successively to industrial disputes inquiry commissioners and boards of conciliation without being settled. In practice, a last effort at settlement is made by the Director of Industrial Relations before a strike vote is actually taken. During the fiscal year 1942–43, nine applications for strike votes were received, one vote was taken, and all disputes were settled without work stoppages.

A special order (P. C. 10802) dated December 1, 1942, empowered the Minister of Labor to refer disputed matters to an industrial disputes inquiry commission and extended the terms of the Industrial Disputes Investigation Act to Crown companies. At the same time employees of such companies were granted the right to belong to trade-unions.

When the Government determined to adjust wages according to changes in the official cost-of-living index under P. C. 8253, dated October 24, 1941, the same order constituted the National War Labor Board to administer this important part of the general stabilization program. With the creation of the Board, the Department of

Labor was relieved in large part from the responsibility of investigation and conciliation in disputes involving wages and bonus payments. Subsequent orders replaced the original provisions relative to wage regulation and also changed the size and composition of the National War Labor Board, as already stated. The latest changes (P. C. 9384, dated December 9, 1943) resulted in abandonment of cost-of-living bonuses and further restricted strikes and lockouts.

Under the wage-control order any employee is deemed to be guilty of a punishable offense who strikes or takes part in any strike (1) to obtain an increase in a single rate or range established under the order, or pursuant to any direction of a war labor board constituted thereunder; (2) to obtain the alteration of a term of an employment which would, directly or indirectly, increase any such rate or range; or (3) for the purpose of obtaining any direction from or of influencing the decision of a war labor board established under this order, or in protest against or to obtain any alteration in any such direction. The employee must prove that the strike in which he took part was not in contravention of the three foregoing provisions. However, the magistrate or justice by whom the employee is tried is not to deprive the accused employee of the benefit of any reasonable doubt existing as to his guilt, after the evidence is submitted.

An employee who strikes or takes part in a strike is covered by the foregoing provisions even though his case is being inquired into, investigated, or reported on by an industrial disputes inquiry commission (appointed under P. C. 4020 as amended) or a board of investigation (established under the Industrial Disputes Investigation Act). No loophole appears to exist whereby a strike involving a wage issue might be classed as legitimate.

Any finding, direction, or order given or made under the authority of the Wartime Wages Control Order of 1943 by the National War Labor Board, or by a regional board, is final and conclusive until varied or revoked by the National Board on review or appeal. It must be accepted by any court and is not subject to review by a court.

Before the introduction of the general prohibition on strikes, an order (P. C. 8021, dated October 14, 1943) had been issued forbidding strikes and lockouts in connection with the mining of coal during the war. However, when the Wartime Wages Control Order of 1943 was promulgated, containing the antistrike provisions summarized above, the strike restrictions on coal-mine labor were rescinded (P. C. 9600, dated December 14, 1943) as no longer required.

Wartime Policies

Definitions of Critical Occupations

DEFINITIONS of some 178 critical occupations were sent to all regional manpower directors by the War Manpower Commission on January 12, 1944.[1] In general, the Commission states that a critical occupation must be one requiring a minimum of 2 years of training time, measured in the light of accelerated wartime training techniques that have been developed by Government agencies, and management and labor. Individuals occupying positions with titles included on the Critical List, who are performing functions requiring less than 2 years of accelerated wartime training, are not to be regarded as engaged in critical occupations.

Policy on Use of War Prisoners in Logging and Lumbering

WAR Department instructions regarding the use of prisoners of war were transmitted to regional manpower directors by the War Manpower Commission on January 22, 1944.[2] According to those instructions, properly trained and supervised prisoners of war may be employed in the production of logs, pulpwood, chemical wood, fuel wood, and other forest products, and in the production of lumber and wood products.

Prisoners of war who work in these industries are to be selected by camp commanders and must be physically fit for such work. In addition, they must be qualified by previous occupation and training, or by training which may be given on the job. In the latter case the U. S. Forest Service may be called upon for advice and assistance in giving the training, which is to include instruction in the use of tools and equipment and in safety measures particularly applicable to the work.

Contracts for prisoner-of-war labor provide that the contractor must furnish adequate supervisory personnel and all necessary tools and arrange for the maintenance of the prisoners. He is forbidden to use prisoners on work with high explosives, on work in the vicinity in which they are being set off, or upon other types of operations that would endanger the prisoners' life or health.

All prisoners are to be excluded from the woods during periods of critical fire hazard. Likewise, the commanding general of the service

[1] War Manpower Commission, Field Instruction No. 193, January 12, 1944.
[2] Idem, Field Instruction No. 207, January 22, 1944.

command may further limit the use of these prisoners in logging and lumbering operations in areas where special conditions present hazards to the safety of the prisoners or to the military security of the area.

Policy on Wage Adjustments of Nonprofit Organizations

NONPROFIT organizations are exempt from the necessity of filing applications for approval of wage and salary adjustments of their employees within the jurisdiction of the National War Labor Board, the Board ruled on January 12, 1944.[1] This order applies to nonprofit community chest funds, foundations, or cemetery companies, and organizations operated without profit and exclusively for religious, charitable, scientific, literary or educational purposes, which have been exempted from the payment of income and social security taxes.

Such organizations will, the War Labor Board states, be expected to observe and abide by the national wage and salary stabilization policy in making any adjustments in the wages or salaries of their employees.

Exceptions to this order may be made by regional war labor boards, if the National War Labor Board approves such exceptions. An exception so made shall, unless otherwise specified, apply only within the territorial jurisdiction of the regional board making the recommendation.

[1] Federal Register, January 28, 1944 (p. 1004).

Industrial Accidents

Causes of Crane Accidents in Shipyards[1]

THE rather dubious distinction of causing more severe injuries in shipyards than any other mechanical equipment places cranes at the very top of the "must" list of the shipyard safety engineer.

During the first 7 months of 1943 the Bureau of Labor Statistics received 30,323 individual reports describing accidents which caused disabling injuries to shipyard workers. These accident reports were submitted by shipyards holding Federal contracts, in conformance with the Minimum Requirements of the U. S. Navy–U. S. Maritime Commission Safety and Health Program. Cranes and other lifting devices were involved in 1,367, or nearly 5 percent of the entire group of reported injuries.

Among the total number of cases in shipyards, particularly severe injuries—fractures, amputations, and brain concussions—occurred in only 16 percent of the reported injuries. In the group of accidents involving cranes, however, the proportion of fractures, amputations, and brain concussions amounted to 38 percent. Over 44 percent of the crane cases were injuries to legs, feet, and toes, and 37 percent of these were fractures. The importance of wearing safety shoes when working with cranes cannot be overemphasized.

Of utmost importance to the safety expert is the fact that 40 percent of the workmen injured in crane accidents were not members of regular crane crews. In other words, the hazards of crane operations extend not only to riggers, erectors, crane operators, and their helpers, who constantly work with the equipment, but also to others who must work in proximity to crane operations or who may occasionally be called upon to assist in those operations. The problem, therefore, is not only to train the regular cranemen in the methods of avoiding injury to themselves, but also to impress upon them that they must guard others from the dangers presented by their equipment. Similarly, it is obvious that all shipyard workers, regardless of their occupations, should be taught to appreciate the possibilities of serious injury when working with or near cranes, and should be impressed with the necessity of taking proper precautions for their own safety in those circumstances.

The importance of frequent and thorough inspection and careful maintenance of hoisting equipment is generally recognized both as a safety measure and also as a contribution to efficient operations. Failure to follow through with necessary repairs, however, is not infrequent. More than 100 injuries were directly ascribed to defective

[1] Prepared in the Industrial Hazards Division by Frank S. McElroy and Arthur L. Svenson.

parts—such as booms, sheaves, or cables—which the operator knew about before starting work. These failures all occurred in the course of normal operations without undue strain from overloading. It should be a hard and fast rule that no crane may continue in operation when there is a known defect in any part of the equipment.

In addition to the failures caused by material defects, a substantial number of mechanical failures resulted directly from overloading—enough to warrant immediate attention to the need for positive control of this hazard. When automatic tension controls are not an integral part of the hoisting equipment, it would seem only a matter of reasonable care to require that all plates or assemblies to be lifted be conspicuously marked in large numerals (white numerals at least 12 inches high) to indicate their weight, and that both the riggers and the crane operator check the weight of every load before attempting to move it. Less simple for the crane crews to overcome, but controllable through a system of strict accountability by welders for weld failure, are those cases in which insufficiently welded pad-eyes pulled loose from plates and allowed the suspended plates to fall.

By far the greatest number of crane accidents were cases of forcible contact between the crane load and the worker. In a substantial volume of cases this occurred when improperly rigged loads fell from the slings upon workers below. More frequently, however, workers were struck by swinging loads or had the loads lowered upon them. In many of these instances the injured workers were performing other work and had little or no choice as to their position when the loads were swung over their heads or were raised in their vicinity. The great necessity for care on the part of the crane operator and his signalman, to protect such workers from the possibility of injury, is obvious. The large number of instances in which riggers and hookers-on were injured by such contacts, however, indicates forcibly that the rules of safe crane operation are frequently disregarded by the very workers to whom they should be best known and to whose safety they have the most direct application. Strict enforcement of a few simple regulations would be highly effective in reducing the number of injuries among riggers and hookers-on. Such regulations would include the following: Requiring all riggers and hookers-on to stand clear (and not in front of stationary objects) before any sling load is raised or lowered; requiring the use of poles or tag lines instead of hands to guide suspended loads; requiring loads to be grounded to stop swinging; and requiring the signalmen to assume full responsibility for seeing that these conditions have been met before any load is moved. Fixing upon the signalman the responsibility of preventing such accidents can be of little avail, however, without full cooperation from the crane operator. The fact that 9 percent of the crane accidents reported resulted from operators' moving their equipment without proper all-clear signals indicates that the required teamwork between signalmen and operators is frequently lacking. The possibility of misunderstanding signals can be minimized if standard signals are used and the authorized signalman is given some distinguishing article of dress, such as a brightly colored helmet. It goes without saying that in no case should an operator accept signals from anyone other than the authorized signalman.

The causes of the reported crane accidents are shown in detail in the following table.

Principal Accident Factors Causing Hoisting Injuries in Shipyards

Cause of accident	Number of injuries	Percent of injuries
All causes	1,367	100
Hazardous exposure in relation to crane and sling load	528	39
Working or standing under suspended load	233	16
Working or standing within spread of load while hooking or unhooking	93	7
Working or standing in line of crane body or boom	79	6
Standing between load and fixed object	78	6
Working or walking on crane tracks or right-of-way	24	2
Riding on load or boom	21	2
Failure to rig properly, or faulty loading or unloading	337	24
Poorly rigged load, hooks or sling	235	17
Pushing load by hand, not using tag line	70	5
Removing sling before load is properly set or balanced	32	2
Unsafe use of cranes	188	14
Operating without authority or signals	127	9
Overloading	28	2
Operating too near stationary equipment	14	1
Operating at unsafe speed	11	1
Failure to use limit switch, or other safety device	8	1
Defective boom, cable, or sheaves	101	7
Placing or storing material on crane tracks, or overhanging on right-of-way	35	3
Unguarded gears or moving parts	25	2
Ascending to cab without using ladder	21	2
Oiling or adjusting moving crane parts	19	1
Other faults	113	8

Industrial Injuries, November 1943

ON THE basis of reports received from 9,774 manufacturing establishments it is estimated that 60,000 manufacturing workers were disabled by work injuries during the month of November. The reporting plants employed 7,110,000 workers, or about 43 percent of the total estimated employment in manufacturing for the month. These plants listed 25,423 disabling injuries in November, of which 0.3 percent were fatalities and 4 percent were known to have resulted in permanent impairments when the reports were prepared. Later information regarding the final outcome of the injuries which were presumed to be only temporary at the end of November, however, will probably increase these proportions of serious injuries.

The complete record of the actual time lost from work because of the injuries which occurred in November will not be available until the final outcome of all the injuries becomes known. Using the conservative average of 20 days of lost time for each disabling injury, however, the direct loss to industry because of the November injuries may be estimated as 1,200,000 man-days of production, which is equivalent to full-time employment for the month for 48,000 workers. This estimate does not include any allowance for the greater economic loss arising from the many deaths and permanent impairments resulting from those injuries.

Comparison with the reports for the previous month showed no general trend in the injury-frequency rates. Among the 71 industries for which comparison was possible, there were 22 which had Novem-

ber frequency rates one or more points higher than in October, and 29 industries with November rates which were one or more points lower than their October rates. Eight of the increases amounted to 5 or more frequency-rate points and 3 of the decreases amounted to 5 or more points. For 21 of the 71 industries, however, the November averages represented the lowest frequency rate reported in any of the first 11 months of 1943. On the other hand, the November averages for 3 industries were the highest monthly rates so far reported for 1943.

The cumulative injury-frequency rates for the first 11 months of 1943 ranged from an average of 5.5 disabling injuries, for each million employee-hours worked, in the women's clothing industry to 63.2 in the sawmill industry. In addition to the women's clothing industry there were 8 other manufacturing industries which had 11-month cumulative injury-frequency rates of less than 10. These were sighting and fire-control equipment, 6.7; radios and phonographs, 7.7; rayon and allied products (chemical), 7.9; cement, 8.6; soap and glycerin, 8.6; men's clothing, 8.7; aircraft, 9.9; and iron and steel, 9.9. At the other end of the scale there were four industries, in addition to sawmills, which had cumulative rates indicating the occurrence of over 40 disabling injuries in every million employee-hours worked. These were forgings, iron and steel, 40.5; foundries, iron and steel, 42.6; plate fabrication and boiler-shop products, 45.5; and planing mills, 54.9.

Industrial Injury-Frequency Rates [1] for Selected Manufacturing Industries, November 1943, With Cumulative Rates for 11 Months of 1943

Industry [2]	November 1943		January–November 1943: Cumulative frequency rate	1942: Annual frequency rate
	Number of establishments	Frequency rate [3]		
Agricultural machinery and tractors	33	22.3	19.1	16.3
Aircraft	44	9.0	9.9	11.4
Aircraft parts	178	12.0	15.0	9.5
Ammunition, 20 mm. and over	317	19.6	25.4	17.2
Ammunition, small-arms	22	11.7	16.6	(4)
Boots and shoes, not rubber	250	16.1	14.1	8.0
Canning and preserving	26	22.1	19.3	23.0
Cement	89	11.4	8.6	7.3
Chemicals, industrial	261	18.8	18.7	16.8
Clothing, men's	415	7.7	8.7	7.7
Clothing, women's	343	5.5	5.5	4.6
Coke ovens	19	23.2	17.3	22.0
Confectionery	6	18.5	17.8	13.2
Construction and mining machinery	102	29.4	32.6	28.4
Corrugated boxes	79	34.1	39.3	30.7
Cotton goods	26	15.9	16.0	16.3
Cutlery and edge tools	23	26.1	24.7	26.5
Drugs, toiletries, and insecticides	41	22.9	22.2	15.4
Electrical equipment and supplies	566	10.3	11.3	7.3
Engines and turbines	69	15.1	[5] 19.2	(4)
Fabricated structural steel	116	32.4	33.4	46.7
Fiber boxes	22	19.1	28.5	25.3
Folding boxes	94	32.3	24.8	20.6
Food-products machinery	19	33.5	35.4	15.3
Forgings, iron and steel	144	33.1	40.5	30.0
Foundries, iron and steel	553	38.8	42.6	46.7
Furniture, except metal	27	19.2	28.8	23.7
General industrial machinery	568	23.0	24.7	19.7
Glass	27	15.9	18.3	20.5
Guns and related equipment	148	15.3	17.6	12.7
Hardware	28	24.8	24.5	20.7
Iron and steel	197	9.9	9.9	10.4
Knit goods	15	8.3	10.7	7.7
Machine shops, general	111	19.5	[6] 26.7	(4)
Metalworking machinery	652	16.1	19.3	23.5
Motor vehicles	121	10.3	12.8	11.7
Motor-vehicle parts	62	23.9	26.1	23.3

See footnotes at end of table.

Industrial Injury-Frequency Rates[1] for Selected Manufacturing Industries, November 1943, With Cumulative Rates for 11 Months of 1943—Continued

Industry[2]	November 1943		January–November 1943: Cumulative frequency rate	1942: Annual frequency rate
	Number of establishments	Frequency rate[3]		
Nonferrous-metal products	314	20.4	24.0	23.6
Paints and varnishes	29	24.5	20.6	17.4
Paper	195	32.0	32.2	26.5
Paper and pulp (integrated)	70	25.8	26.6	25.4
Petroleum refining	116	10.2	12.1	10.7
Planing mills	36	49.3	54.9	37.6
Plate fabrication and boiler-shop products	63	37.2	[7] 45.5	[4]
Plumbers' supplies	15	15.5	18.7	20.1
Pottery	4	15.4	22.9	15.5
Pulp	20	28.0	31.2	29.5
Radios and phonographs	162	7.6	7.7	5.9
Railroad equipment	35	18.8	20.6	17.4
Rayon and allied products (chemical)	11	6.9	7.9	8.4
Rubber boots and shoes	11	7.7	12.0	8.6
Rubber tires	36	14.3	13.8	11.9
Sawmills	27	53.1	63.2	61.7
Set-up boxes	218	19.6	17.0	13.3
Shipbuilding	255	26.0	29.2	33.1
Sighting and fire-control equipment	30	6.7	6.7	7.2
Slaughtering and meat packing	190	34.5	35.8	44.8
Small arms	49	14.2	11.4	9.1
Smelting and refining (nonferrous)	169	26.4	29.1	29.4
Soap and glycerin	8	8.0	8.6	10.3
Special industry machinery	59	21.4	23.1	25.2
Stamped and pressed metal products	249	28.2	31.5	20.6
Steam fittings and apparatus	44	26.0	34.0	39.7
Stoves and furnaces, not electric	50	28.8	34.8	33.7
Tanks, military	24	11.2	12.7	9.3
Tank parts, military	59	12.9	18.9	7.7
Textile machinery	10	21.7	16.6	18.3
Tin cans and other tinware	29	15.6	18.7	20.3
Tools, except edge tools	35	28.1	25.6	24.3
Wire and wire products	132	19.7	22.0	21.6
Wooden goods	28	14.8	19.8	17.9

[1] The frequency rate represents the average number of disabling industrial injuries for each million employee-hours worked.
[2] A few industries have been omitted from this table because the coverage for the month did not amount to 1,000,000 or more employee-hours worked.
[3] Computed from all reports received for the month. Not based on identical plants in successive months.
[4] Not available.
[5] Cumulative from June 1.
[6] Cumulative from May 1.
[7] Cumulative from April 1.

Housing Conditions

New Dwelling Units in Nonfarm Areas, 1942 and 1943[1]

Summary

THE number of new nonfarm family dwelling units started during 1943 totaled only 350,900, a third less than the 496,600 units started during 1942. Wartime restrictions imposed early in 1942 reduced the 1943 total to less than half the 1941 post-depression peak of 715,000 units. Practically all of the units started during 1943 were built for the families of war workers or military personnel in areas of large population increases.

Publicly financed war-housing projects on which construction was started during 1943 will provide accommodations for 167,149 families, or about 14 percent less than the 195,407 families provided for in public projects begun during 1942. Private builders started work on 183,751 new family dwelling units, or 39 percent less than the 301,193 units begun during 1942. In addition to the family dwelling units, Federally financed dormitory projects put under construction during 1943 will provide accommodations for 45,494 single persons and Federally financed trailer parks will contain 29,844 trailers.

Increasing shortages of building materials resulted not only in reducing the number of new family dwelling units built, but in drastically changing the nature of the units. Over 95 percent of the publicly financed units begun during 1943 were in temporary-type structures. In 1942, temporary units constituted 72 percent of the public total, and in 1941, 13 percent. Increasing proportions of the privately financed units have been in structures of the two-family and multifamily types. In 1940 and 1941, 5 percent of the new privately financed units were of the two-family type, as compared to 10 percent in 1943. Multifamily units constituted about 10 percent of the private total in 1940 and 16 percent in 1943.

The permit valuation of the 350,900 units started during 1943 is estimated at $897,931,000, a decline of 41 percent from the $1,530,606,000 estimated for 1942. Publicly financed units accounted for $358,269,000 or 40 percent of the 1943 total, as compared to $582,246,000 or 38 percent of the 1942 total. Since permit valuations commonly understate actual building costs, construction of the 350,900 new dwelling units started during 1943 will involve expenditures of approximately $980,000,000.

[1] Prepared in the Bureau's Division of Construction and Public Employment by George Schumm.

Scope of Report

These estimates cover the construction of all new family dwelling units in the nonfarm area of the United States. The "nonfarm area" of the United States consists of all urban and rural nonfarm places. The urban designation is applied to all incorporated places with a population of 2,500 or more in 1940, and, by special rule, to a small number of unincorporated civil divisions. Rural nonfarm construction includes all construction for nonagricultural use in unincorporated areas and incorporated places of less than 2,500 population. Hence, urban construction is classified by location, whereas rural nonfarm construction is classified according to the intended use of individual buildings.

Building-permit reports collected by the Bureau of Labor Statistics have provided the basic information for current estimates of residential construction. The Bureau began the regular collection of these data in 1920, at first including only the larger cities. Since that time coverage has been steadily expanded until it now includes more than 2,400 cities and 1,000 rural incorporated places. In addition, since 1939 a small number of counties have reported building permits issued for their unincorporated areas: Valuable supplementary data, particularly with respect to rural construction, were made available for the period January 1940 through August 1942 by the Defense Housing Survey, a joint enterprise of the Bureau of Labor Statistics, the National Housing Agency, and the Work Projects Administration.

Since building permits are issued when construction work is about to start, estimates derived from permits represent the future dwelling-unit capacity of buildings upon which construction was started in the period specified. No attempt is made here to estimate the number of family accommodations gained by alterations and conversions or those lost by demolitions.

Trends From 1910 Through 1943

The 1943 total of 351,000 new nonfarm family dwelling units started was less than half of the 1941 post-depression peak of 715,000 units, and somewhat over a third of the 1925 peak of 937,000 units. On the other hand, it was only slightly less than the average for the preceding decade (1933–42) and almost four times the 1933 low of 93,000 units. The 1943 volume exceeded that of any year during the first World War (1917–20) and the period 1930 through 1937.

The similarity in the effects of World War I and II on the number of new dwelling units can be seen from table 1. In 1917, as in 1942, the volume of new units declined sharply and continued to decline through the second year of the United States' active participation in the war. The rate of decline was, however, much greater in 1917–18. The principal difference lay in the volume of publicly financed war housing. Very few publicly financed family dwellings were provided during the first World War; of the few thousand units that were built, the first became available late in 1918. In striking contrast, during 1942 and 1943 the Federal Government provided over two-fifths of all new units. For the most part these were temporary units, which will not become part of the permanent housing supply.

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TABLE 1.—*New Dwelling Units in Nonfarm Areas, 1910–43* [1]

Year	Total nonfarm	Area [2]		Type of dwelling		
		Urban	Rural nonfarm	1-family	2-family [3]	Multifamily [4]
1910	475,000					
1911	480,000					
1912	490,000					
1913	455,000					
1914	445,000					
1915	475,000					
1916	480,000					
1917	230,000					
1918	120,000					
1919	330,000					
1920	247,000	196,000	51,000	202,000	24,000	21,000
1921	449,000	359,000	90,000	316,000	70,000	63,000
1922	716,000	574,000	142,000	437,000	146,000	133,000
1923	871,000	698,000	173,000	513,000	175,000	183,000
1924	893,000	716,000	177,000	534,000	173,000	186,000
1925	937,000	752,000	185,000	572,000	157,000	208,000
1926	849,000	681,000	168,000	491,000	117,000	241,000
1927	810,000	643,000	167,000	454,000	99,000	257,000
1928	753,000	594,000	159,000	436,000	78,000	238,000
1929	509,000	400,000	109,000	316,000	51,000	142,000
1930	330,000	236,000	94,000	227,000	29,000	74,000
1931	254,000	174,000	80,000	187,000	22,000	45,000
1932	134,000	64,000	70,000	118,000	7,000	9,000
1933	93,000	45,000	48,000	76,000	5,000	12,000
1934	126,000	49,000	77,000	109,000	5,000	12,000
1935	221,000	117,000	104,000	183,000	8,000	30,000
1936	319,000	211,000	108,000	244,000	14,000	61,000
1937	336,000	218,000	118,000	267,000	16,000	53,000
1938	406,000	262,000	144,000	317,000	18,000	71,000
1939	515,000	359,000	156,000	399,000	29,000	87,000
1940	603,000	397,000	206,000	486,000	37,000	80,000
1941	715,000	440,000	275,000	613,000	34,000	68,000
1942	497,000	281,000	216,000	391,000	20,000	86,000
1943	351,000	210,000	141,000	287,000	18,000	46,000

[1] Data for 1920–29 are from National Bureau of Economic Research; data for 1910–19 and 1930–43 from Bureau of Labor Statistics. No break-downs are available for 1910–19.
[2] Urban and rural nonfarm classifications for years 1920–29 are based on 1930 Census; for years 1930–43, on 1940 census.
[3] Includes 1- and 2-family dwellings with stores.
[4] Includes multifamily dwellings with stores.

Changes from 1942 to 1943

The 29-percent decline from 1942 to 1943 in the total number of new nonfarm family dwelling units started was caused primarily by a 39-percent decrease in privately financed units (table 2). Publicly financed units also declined 15 percent. Most of the public war housing program is now virtually completed, however; while the current level of privately financed activity has changed only slightly since mid-1942, except for seasonal fluctuations, and appears likely to remain unchanged for some months, if not for the duration of the war.

Over 95 percent of the 167,149 publicly financed units started during 1943, or 159,976 units, were in temporary-type structures, as compared to 72 percent of the 1942 total. The number of privately financed one-family units started declined 46 percent from 1942 to 1943, whereas the number of two-family units increased 2 percent and multifamily units declined only 6 percent. Shortages in building materials were mainly responsible for these changes in structural types as well as for the decline in volume.

TABLE 2.—*New Dwelling Units in Nonfarm Areas, 1942 and 1943, by Population Group, Source of Funds, and Type of Structure*

Area and population group (1940 Census)	Total new dwelling units		New dwelling units financed by—			
			Public funds		Private funds	
					All types	
	1943	1942	1943	1942	1943	1942
All nonfarm areas	350,900	496,600	167,149	195,407	183,751	301,193
Percent of change, 1942 to 1943	−29.3		−14.5		−39.0	
Urban (cities)	210,100	280,900	90,361	95,946	119,739	184,954
500,000 and over	38,400	58,100	14,610	16,561	23,790	41,539
100,000 to 500,000	53,200	59,600	21,872	19,639	31,328	39,961
50,000 to 100,000	23,800	32,800	12,336	13,163	11,464	19,637
25,000 to 50,000	20,200	26,700	9,279	6,801	10,921	19,899
10,000 to 25,000	39,400	59,800	19,827	29,598	19,573	30,202
5,000 to 10,000	22,100	28,400	8,703	7,872	13,397	20,528
2,500 to 5,000	13,000	15,500	3,734	2,312	9,266	13,188
Rural nonfarm areas	140,800	215,700	76,788	99,461	64,012	116,239

Area and population group (1940 Census)	New dwelling units financed by—					
	Private funds—Continued					
	1-family		2-family [1]		Multifamily [2]	
	1943	1942	1943	1942	1943	1942
All nonfarm areas	135,355	252,323	17,766	17,463	29,630	31,407
Percent of change, 1942 to 1943	−46.0		+1.7		−5.7	
Urban (cities)	78,775	138,970	16,234	15,747	24,730	30,237
500,000 and over	12,409	22,334	4,251	4,448	7,130	14,334
100,000 to 500,000	20,362	31,284	5,220	4,373	5,746	4,304
50,000 to 100,000	6,154	13,808	1,371	2,049	3,939	3,780
25,000 to 50,000	7,226	14,154	1,291	1,691	2,404	4,054
10,000 to 25,000	14,109	26,757	2,319	1,517	3,145	1,928
5,000 to 10,000	10,084	17,970	1,315	1,188	1,998	1,370
2,500 to 5,000	8,431	12,240	467	481	368	467
Rural nonfarm areas	57,580	113,353	1,532	1,716	4,900	1,170

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.

The number of new units built in rural areas during 1943 was 35 percent less than in 1942, and the number built in urban areas declined 25 percent. The shift of volume from urban to rural in 1942 and from rural to urban in 1943 reflects principally the effects of the public war housing program. In 1942, several extremely large projects, notably the Vanport City (Oreg.) project containing almost 10,000 units, were put under construction contract. The large tracts of vacant land necessary for such projects are seldom available in urban areas. Also, the construction of entire communities to serve isolated war activities contributed to the urban-to-rural shift in 1942. Such projects were less prominent in 1943, and it was possible to utilize small vacant tracts in urban areas to a greater extent than in 1942.

The number of new privately financed units declined in 1943 in all city-size groups and in the rural nonfarm area. Decreases ranged from 22 percent for cities of 100,000 to 500,000 population, to 45 percent for cities of 25,000 to 50,000 population and for the rural nonfarm area. Since 1940, increasing proportions of all multifamily-type units have been in smaller cities. The proportion of all multifamily units

started in cities of over 100,000 population decreased from 71 percent in 1940 to only 43 percent in 1943. The relatively small number of new units built in New York City and the generally increased construction of such units elsewhere to conserve building materials have been responsible for this trend.

In 1943, even more than in 1942, the geographic distribution of the new nonfarm family dwelling units was determined by the locations of war activities requiring workers from outside the area. In the Mountain States 40 percent more units were provided during 1943 than during 1942, while the totals for the other regions declined variously from 6 percent for the West South Central States to 58 percent for the West North Central States. Twenty-six percent of the new units in 1943 were in the Pacific States, 19 percent in the South Atlantic States, and 17 percent in the East North Central States.

More publicly financed units were put under construction contract during 1943 than in 1942 in three regions—the Mountain, West South Central, and East North Central States. Over a third of all public units begun during 1942 and 1943 were in the Pacific States, while almost another third were in the East North Central and South Atlantic States.

TABLE 3.—*New Dwelling Units in Nonfarm Areas, 1942 and 1943, by Geographic Division, Source of Funds, and Type of Structure*

Geographic division	Total new dwelling units		New dwelling units financed by—			
			Public funds		Private funds	
					All types	
	1943	1942	1943	1942	1943	1942
All divisions	350,900	496,600	167,149	195,407	183,751	301,193
Percent of change, 1942 to 1943	−29.3		−14.5		−39.0	
New England	11,100	22,300	4,311	9,367	6,789	12,933
Middle Atlantic	30,500	61,400	12,615	15,794	17,885	45,606
East North Central	61,400	81,200	24,602	18,375	36,798	62,825
West North Central	10,200	24,200	4,841	6,599	5,359	17,601
South Atlantic	68,400	95,400	25,393	43,417	43,007	51,983
East South Central	13,900	27,000	5,929	12,571	7,971	14,429
West South Central	42,800	45,300	19,116	12,094	23,684	33,206
Mountain	20,500	14,600	13,742	6,943	6,758	7,657
Pacific	92,100	125,200	56,600	70,247	35,500	54,963

Geographic division	New dwelling units financed by—					
	Private funds—Continued					
	1-family		2-family [1]		Multifamily [2]	
	1943	1942	1943	1942	1943	1942
All divisions	136,355	252,323	17,766	17,463	29,630	31,467
Percent of change, 1942 to 1943	−46.0		+1.7		−5.7	
New England	4,896	11,560	264	355	1,629	1,018
Middle Atlantic	13,000	35,185	2,363	5,770	2,522	4,651
East North Central	28,095	55,867	4,443	4,045	4,260	2,913
West North Central	3,466	15,457	1,098	606	795	1,538
South Atlantic	26,959	38,056	3,403	2,264	12,645	11,663
East South Central	7,033	13,110	434	913	504	406
West South Central	20,296	31,053	2,041	1,741	1,347	653
Mountain	5,964	6,835	308	304	486	115
Pacific	26,646	45,190	3,412	1,465	5,442	4,510

[1] Includes 1- and 2-family dwelling with stores.
[2] Includes multifamily dwellings with stores.

The geographic distribution of the new private units in 1943 differs widely from the distribution of the new public units. The public war-housing program has principally provided housing for which there appeared to be only a temporary need, whereas private builders have furnished housing of a more permanent nature. Consequently, larger proportions of public housing have been concentrated in areas like the Pacific and Mountain States, while private builders have provided the larger part of the new units in areas such as the East North Central and South Atlantic States. All geographic divisions shared in the 39-percent decline in the number of privately financed units begun in 1943, as compared to 1942, the declines ranging from 12 percent for the Mountain States to 70 percent for the West North Central States (table 3). More 1- and 2-family privately financed units were put under construction during 1943 in the East North Central States than in any other region, while 43 percent of the new multifamily units were in the South Atlantic States.

Privately Financed War Housing

Limited generally to war housing for which there will be permanent need and by acute shortages of both building materials and labor, private builders started construction on 184,000 new family dwelling units in 1943. This was 39 percent fewer units than in 1942 and fewer than in any previous year since 1920 except for the 3-year depression period 1932–34.

Between July 1940 and March 1942, private builders started construction on over a million homes, of which an estimated 400,000 were classified as war housing units, i. e., units costing less than $6,000 and built in designated critical housing areas. In April 1942, the War Production Board issued Conservation Order L–41, prohibiting all nonessential construction. From then until the end of 1943, construction was started on over 300,000 additional private war housing units.[2] Between September 1941 (when the War Production Board first began issuing priorities to builders of war housing in critical areas) and the end of 1943, the War Production Board had approved preference ratings for 545,000 new units. Of these, 327,000 were completed and 78,000 more were under construction by the end of 1943.

Approximately 156,000 family dwelling units were put under construction during 1943 under the private war housing program of the National Housing Agency. Most of the difference between this figure and the estimated private total of 184,000 is accounted for by small houses costing only a few hundred dollars apiece and built without priorities assistance.[3] In addition, nonwar housing priorities were issued for about 4,000 units, usually to replace structures which were destroyed by fire, flood, tornado, lightning, etc. There may also have been some illegal building.

Shortly after the start of the defense program, it became apparent that because of the unusual risks involved, private builders would require encouragement in supplying war housing units. Consequently, in March 1941, Congress added Title VI to the National

[2] For a more complete discussion of the private war housing program through June 1943, see Monthly Labor Review, September 1943 (p. 513).
[3] See Monthly Labor Review, December 1943 (p. 1058): Construction of $500 Houses in 1943.

Housing Act governing the operations of the Federal Housing Administration. This amendment liberalized FHA-insurance terms to builders who would provide low-cost war housing in specific areas designated by the President. Only 27,500 of the 220,300 FHA-insured units on which construction was started during 1941, were insured under Title VI. About 112,300 or 70 percent of the 159,600 FHA-insured units started during 1942 were insured under Title VI and during 1943 all but about 700 of the 137,800 new FHA units were so insured.

Private builders began curtailing their activities slightly, late in 1941, but it was not until April 1942 that the volume was seriously affected. Only 81,000 units were put under construction during the second quarter of 1942, as compared to 111,000 in the previous quarter and 191,000 in the second quarter of 1941. Activity slowly declined thereafter, reaching a low of 34,000 units in the first quarter of 1943. Since that time little or no change, except that resulting from seasonal factors, has occurred. It now seems probable that, unless the military situation should greatly improve before fall, there will be little change in volume during 1944.

Publicly Financed War Housing

Under the publicly financed war housing program, started in June 1940, projects providing permanent or "duration" accommodations for 502,000 families and 161,000 single persons, as well as 50,000 stopgap housing units (trailers) were available or were under construction contract by the end of 1943. An additional 19,000 family units, 2,000 dormitory units, and 6,000 trailers had been assigned for development but had not yet been placed under contract.[4]

Virtually all Federally financed war housing put under contract since February 1942, which was not situated on military reservations, has been constructed under the supervision of the Federal Public Housing Authority of the National Housing Agency. This latter agency was created by Executive order in February 1942 to consolidate the various war housing activities of 16 Federal agencies, of which the most important were the United States Housing Authority and the Federal Works Agency.[5]

Over $2,285,000,000 was made available from June 1940 through December 1943 to provide housing for war workers. The Lanham Act (Public, No. 849, 76th Cong.) has been the principal source of funds. A total of $1,400,000,000 has been appropriated under this act and its amendments, since its original enactment on October 14, 1940. An additional $320,000,000 was provided by Public Act No. 9, 77th Cong., for temporary housing which could not be constructed from any other funds. About $565,000,000 has been made available from all other sources, including appropriations for the War and Navy Departments, Defense Plant Corporation, U. S. Maritime Commission, and others.

Originally, Federally financed war housing projects consisted entirely of permanent units which were to be used temporarily by

[4] Federal Public Housing Authority, Monthly Progress Report on All Public War Housing, December 31, 1943.

[5] For a more complete discussion of the war housing organization as it existed in December 1941, see the Monthly Labor Review for May 1942 (p. 1139). (Also reprinted as Serial No. R. 1461.)

defense workers. The possibility of overbuilding such units in some localities, and the necessity to conserve scarce building materials while providing a maximum amount of shelter, resulted in the shift to "demountable" and other temporary-type units shown in table 4.

In addition to the 159,976 temporary and 7,173 permanent family units,[6] dormitory projects to house 45,494 persons and trailer parks to contain 29,844 trailers were put under construction contract during 1943. During 1942, work was started on 140,598 temporary and 54,809 permanent family units, 103,692 dormitory units, and 17,032 trailer units.[7]

In order further to conserve critical materials, while providing a maximum number of dwelling units, the publicly financed conversion program of the National Housing Agency was begun early in 1943 under the supervision of the Home Owners Loan Corporation. Under this program, 15,093 additional units had been made available, 19,363 were under construction, and 21,117 were programmed but were not yet under contract by the end of 1943.

TABLE 4.—*Summary of New Dwelling Units in Nonfarm Areas, 1935–43, by Source of Funds* [1]

Period	Total new dwelling units	Privately financed units	Publicly financed units		
			Total	Permanent	Temporary and demountable
1935	221,000	215,705	5,295	5,295	0
1936	319,000	304,225	14,775	14,775	0
1937	336,000	332,406	3,594	3,594	0
1938	406,000	399,294	6,706	6,706	0
1939	515,000	458,458	56,542	56,542	0
1940	602,600	529,571	73,029	73,029	0
1941	715,200	619,460	95,740	83,586	12,154
1942	496,600	301,193	195,407	54,809	140,598
First quarter	138,500	111,025	27,475	24,654	2,821
Second quarter	166,600	81,121	85,479	16,628	68,851
Third quarter	94,600	63,888	30,712	4,618	26,094
Fourth quarter	96,900	45,159	51,741	8,909	42,832
1943	350,900	183,751	167,149	7,173	159,976
First quarter	118,200	34,185	84,015	2,897	81,118
Second quarter	82,000	51,583	30,417	936	29,481
Third quarter	76,300	52,585	23,715	1,400	22,315
Fourth quarter	74,400	45,398	29,002	1,940	27,062

[1] Does not include trailer units or dormitory accommodations for single persons.

Estimated Permit Valuation

The permit valuation of the 350,900 new nonfarm dwelling units started during 1943 was estimated at $897,931,000, of which $539,602,000 was for privately financed units and $358,269,000 for publicly financed projects (table 5). The 496,600 new units started during 1942 had a permit valuation of $1,530,606,000, of which $948,360,000 was for privately financed and $582,246,000 for public projects. The disproportionate decrease in total valuation, from 1942 to 1943, of 41 percent, as compared to the decrease of 29 percent in the number

[6] Data on family-dwelling units started during 1943 exclude 695 units added by conversion and 1,359 slum-clearance units made available for war housing.

[7] Dormitory and trailer data exclude completed projects canceled before August 1, 1943.

of dwelling units, is due in part to the greatly reduced average valuation of the publicly financed units and in part to the greater proportion of publicly financed dwelling units put under construction in 1943.

For a number of reasons, the estimates of construction costs which are given by builders when applying for permits generally understate actual costs. The results of a study made by the Bureau of Labor Statistics indicate that costs of 1-family houses average 15.5 percent more than the valuations entered on the permit records. Further study may modify this conclusion and may also show a different relationship between costs and permit valuations of 2-family and multi-family units. In the absence of more complete data, permit valuations of privately financed units should be increased 15.5 percent to yield estimated construction costs. Construction costs for publicly financed units are obtained from contract awards and hence no adjustment of public totals is necessary. With these considerations in mind, construction of the 350,900 units in 1943 and 496,600 units in 1942 is estimated to involve expenditures of approximately $980,000,000 and $1,680,000,000, respectively.

TABLE 5.—*Estimated Permit Valuation of New Dwelling Units in Nonfarm Areas, 1942 and 1943, by Geographic Division and Source of Funds*

Geographic division	Estimated valuation (in thousands of dollars) of new dwellings					
	Total		Private funds		Public funds	
	1943	1942	1943	1942	1943	1942
All divisions	897,931	1,530,606	539,662	948,360	358,269	582,246
Percent of change, 1942 to 1943	−41.3		−43.1		−38.5	
New England	35,393	83,394	25,713	49,452	9,680	33,942
Middle Atlantic	93,507	230,392	59,476	168,127	34,031	62,265
East North Central	214,889	307,711	149,734	241,081	65,155	66,630
West North Central	23,614	70,368	13,413	52,383	10,201	17,985
South Atlantic	163,092	270,939	107,754	139,370	55,338	131,569
East South Central	23,101	64,345	12,113	29,050	10,988	35,295
West South Central	75,367	113,684	43,804	82,809	31,563	30,875
Mountain	50,759	42,264	19,418	20,412	31,341	21,852
Pacific	218,209	347,509	108,237	165,676	109,972	181,833

Subsistence Homesteads as a Housing and Relief Measure

Summary

THE subsistence-homesteads program, adopted as a combination housing and relief expedient during the depression, has been subjected to appraisal from the point of view of its post-war possibilities. A critical study, made by investigators of the United States Bureau of Agricultural Economics at the request of the Farm Security Administration,[1] reached the conclusion that the housing part of the program was a success but did not reach the low-income level for which it was designed; as a relief measure the homesteads fell short, for they neither provided relief nor eliminated the need for it. Subsistence gardening was comparatively little used, and the investigators are of the opinion

[1] A Place on Earth: A Critical Appraisal of Subsistence Homesteads. Washington, U. S. Department of Agriculture, Bureau of Agricultural Economics, 1942.

that its future possibilities lie in the realm of pastime and in the combination of part-time employment with gardening. They also believe that subsistence homesteads have certain practical features that could be utilized in a future program, but emphasize that such a program should be worked out in advance and have clear-cut general policies and objectives, which should be consistent and unchanging; and that the plan should insure in advance that there will be a source of livelihood for the homesteaders.[2]

Scope of Study

In 1939 the Bureau of Agricultural Economics, at the request of the Farm Security Administration, undertook a critical study of the subsistence homesteads. The FSA wanted to know "what things had worked, what things had not worked, and, if possible, what social, psychological, and economic factors were responsible for certain developments in the projects that were not easily or superficially explainable." The results of the study, which was completed in 1941, were later reexamined in the light of the war and of possible national programs both during and after the war.

Beginning in 1933 the Division of Subsistence Homesteads initiated 33 projects and the Federal Emergency Relief Administration 34 projects; both groups were turned over to the Resettlement Administration in 1935. Later, nearly 100 projects, most of which called for full-time farming operations differing sharply from the subsistence-homesteads communities, were started under the Resettlement Administration and its successor, the Farm Security Administration.

For its study the Bureau of Agricultural Economics selected 9 projects, including those successful and unsuccessful, rural and urban, and representative of various phases of the program. All 9 were among the oldest group of projects, but even these were only 6 or 7 years old at the time of study.

The investigators lived in the communities to which they were assigned and mingled with the homesteaders and other local people. They examined the history and studied the financial operations of the project. Their purpose was to find out and report "what was going on, and why. The emphasis was to be on the why." All the investigators were trained sociological observers.

The report under review sets forth their individual findings, as well as conclusions drawn from the whole. In recognition of the fact that the base of study was small and inadequate for sweeping conclusions, those presented are given as tentative and as leaving open several important points which "rest ultimately upon standards of value that science may identify, but cannot appraise."

The projects chosen for study were Austin Acres, Austin, Minn.; five projects (Palmerdale, Mt. Olive, Greenwood, Cahaba, and Bankhead Farms)[3] near Birmingham, Ala.; Cumberland Homesteads, Crossville, Tenn.; El Monte Homestead Project, El Monte, Calif.; Granger Homesteads, Granger, Iowa; Houston Gardens, Houston, Tex.; Jersey Homesteads, near Hightstown, N. J.; Longview Homesteads, Longview, Wash.; and Phoenix Homesteads, Phoenix, Ariz.

[2] For detailed accounts of the subsistence-homesteads program since its inauguration in 1933, see Monthly Labor Review, issues of December 1933 (p. 1327), February 1934 (p. 245), January 1935 (p. 19), December 1941 (p. 1368), and February 1942 (p. 360).

[3] These were considered as one project in the report.

Development of the Program

The report points out that no just appraisal can be made of the program without an understanding of the circumstances in which it originated.

> [The subsistence homesteads] were the product of the worst Nation-wide depression in our history, with all the general confusion and frenzy that that implies. They were also probably the first attempt by direct and deliberate governmental action to make a complex, abstract, social idea into a working, concrete, social reality. This is not to imply that the projects themselves were necessarily confused or frenzied nor does it mean that ordinary good sense was a useless commodity at the time they were begun. Yet we must constantly remind ourselves, as we look at these projects today, that they were established at a time when haste had to be a watchword, when pressures were coming from all sides, and when there was no experience in such matters that could be taken for a guide.
>
> Perhaps even more important in the long run is the fact that the subsistence-homesteads movement, and the program that grew out of it, were conceived in terms of a kind of pessimism born of bitter and hopeless experience with mounting unemployment and tremendous, unsolved problems of relief. Most of the early advocates of subsistence homesteads, to judge by what they said and wrote in the dark days of 1932–33, had become convinced that full industrial employment was never to be expected again. The subsistence-homesteads movement, and the action program that developed out of it, were founded upon this assumption, and the proponents and the makers of this program were far from being the only ones who believed these things. The program was devised as a method of relief for conditions of mass unemployment especially acute then, and expected to continue indefinitely.
>
> Unless such things as these are remembered, we are likely to think of the subsistence homesteads exclusively in terms of the completely changed economic condition in which they exist today, and in terms also of the experienced and established administrative machinery that has grown up in the years since 1933.

ADMINISTRATIVE DEVELOPMENT AND PROBLEMS

The program of subsistence homesteads was inaugurated in 1933 under authority of one section of the National Industrial Recovery Act. That section provided $25,000,000 to be used in establishing subsistence homesteads, "for aiding in the redistribution of the overbalance of population in industrial centers."

The Division of Subsistence Homesteads was established within a month, in the Department of the Interior.

The program got under way immediately, but in the absence of previous practical experience on which to draw and of any specific purposes or objectives stated in the law, the first step had to be the evolution of some practical principles and procedures on which to work. Haste was necessary, for this was in the worst of the depression when the emergency made immediacy essential.

As formulated by the director of the Subsistence Homesteads Division, the underlying principles of a subsistence-homesteads program should be the following:

> (1) The Subsistence Homestead Section of the Economic Recovery Act carries three implications—
> (a) Giving immediate employment as in public works.
> (b) Laying the foundations for a new type of homes and security for wage earners.
> (c) Laying the basis for the shifting of some population groups to give better adjustment to * * * economic situations.
> (2) The whole project should be regarded as somewhat experimental and as foundation laying.
> (3) The proposal should be carefully studied but action should take place as rapidly as is consistent with careful investigation and planning.

(4) The projects should be distributed throughout the United States * * * that they may * * * focus public attention to the possibilities of decentralization in industry and the development of a new pattern of life, carrying with it greater security, opportunity for constructive use of leisure time.
(5) The project should contribute as much as possible to the temporary problem of unemployment relief.
(6) If possible, projects should be located where there is opportunity of part-time industrial employment.

Immediate widespread public interest was manifested and the applications filed for projects would, if granted, have called for the outlay of 4 billion dollars instead of the 25 million available.

At the end of 10 months the Division had approved 57 projects, had advanced funds to 27, and had purchased land for 25. On 9 projects the preliminary land-clearing work had been done and house construction was under way. The basic principles were still those of assisting in the decentralization of surplus urban industrial labor or of stranded groups, of encouraging the combination of part-time industry with part-time subsistence gardening, and of conducting "demonstrations of rural rehabilitations, thereby attracting the inhabitants of urban areas back to the land." Decentralization and local participation were the keynotes of the program. To carry out, without the delays of red tape, the actual business operations involved, the Federal Subsistence Homesteads Corporation was formed with a subsidiary corporation for each project to determine local policies.

Early in 1934, however, the program was centralized and the local corporations abolished. In their place were created local boards with only advisory powers. This change in policy resulted in an almost complete turnover in the Federal staff directing the program and a considerable loss of confidence in the plan, at the local level.

Meanwhile the program was running into other difficulties. It had been implicit, in the planning of the first projects, that part-time employment would be furnished by private industries which would start factories in or near the homestead projects. These factories failed to materialize. Government-owned factories, hit upon as a second choice, were forbidden by Congress on the ground of competition with private business.[4]

On the preliminary clearing work, as well as on some parts of the actual house construction, relief labor had been used. An opinion of the Solicitor of the Department of the Interior, October 2, 1934, declared that thereafter the NIRA provisions as to wages and hours of PWA labor must henceforth apply to the labor on the homesteads projects as well. This provision, the delays in obtaining workers of the required skills, and the lower efficiency of relief labor together resulted in raising construction costs by about one-third, "and thus saddled upon homesteads to be sold to low-income groups construction costs that frequently could be met only by subsidy, or by charging off a share to relief." [5]

The program, along with other provisions of Title II of the NIRA, would have come to an end on June 16, 1935; but its life was continued by Executive order which, however, created an entirely new organiza-

[4] Later some private industries established branches at several of the projects and in some cases cooperative industries were established, but in a few no sure source of income was ever secured.
[5] Many of the Bureau of Agricultural Economics investigators believed that the use of relief labor was "inevitable and entirely wise under the circumstances"—providing a livelihood, increasing their skills, and having a certain psychological value. Nevertheless it was impossible to determine clearly what portion of the expense should be considered a public expenditure for relief and what portion was properly chargeable to construction expense. As it was, "the use of relief labor tended to swell the apparent construction costs to an extent that prejudiced greatly the projects' later chances of being regarded as a financial success."

tion, the Resettlement Administration. This agency was given the three functions of (1) resettlement of destitute or low-income families from urban or rural areas into subsistence communities, (2) carrying on reclamation, etc., projects, and (3) making loans to farmers, farm tenants, and farm laborers to finance the purchase of land and equipment. In this new program the subsistence homesteads took a minor place.

At the end of 1936 the Resettlement Administration was made a part of the Department of Agriculture. This was accompanied by further changes of policy, one of which was that of favoring resettlement on individual farms scattered throughout a section (termed "infiltration"), rather than the establishment of the previous community type of project.

At the close of the fiscal year 1936–37, there were 122 active resettlement projects of all types, of which 38 were completed and 84 were under construction.

In the meantime considerable opposition had developed, and pressure was brought for the immediate liquidation of the homesteads projects. In the language of the report under review—

> It had been the wish of those administering the subsistence-homesteads program from the first, and consistently, to pass on the management and responsibility for the projects to local groups as soon as the projects could be put on a sound foundation and as soon as the ability and responsibility of such groups seemed to be established. But this demand for hastened liquidation forced their hand beyond what had previously been considered feasible. It was felt that action would have to be taken as fast as possible, provided only that something could be done without completely deserting the original aims for which the projects had been established.

The original plan had contained no formal provisions for sale of the homesteads. There appeared to have been some idea of getting the projects into operation, of requiring some period of probation during which the residents would demonstrate their fitness or lack of it, after which a plan of sale might be worked out. When this plan was eventually formulated, a 40-year period of amortization was provided.

Under the accelerated pace necessitated by the demand for liquidation of the homesteads projects, two methods were devised—that of direct sale to the homesteader, and that of sale to a homestead corporation. The first was open to the objection that it required a Government representative (project manager) at each project to safeguard the Government's interest and the imposition of restrictions designed to prevent speculation.

The homestead corporation had the advantage of being run by the homesteaders, and of providing local responsibility for the project. It assumed liability for the purchase (giving a mortgage to the Government), managed the operations, and collected the payments from the residents who, under the plan, would be purchasing their holdings from the corporation. It had the disadvantage, from the homesteaders' point of view, that the expenses of administration and the salary of the project manager were additional costs added, pro rata, to the cost of the individual holding.

In September 1937 another shift of the program took place when it was absorbed into the newly created Farm Security Administration. The major functions of the new agency were those involved in rural rehabilitation, tenant purchase, and the continuance of the various kinds of resettlement projects. By this shift the subsistence-homesteads program became merely one part of the work of one of the three divisions of the FSA.

As of June 30, 1940, the FSA had under its supervision 164 projects of various kinds and 56 camps for migrants. In addition, 19 subsistence-homesteads projects had been conveyed to homestead associations and in 4 others the homesteads were being sold directly to individual families.

The Program From the Homesteader's Viewpoint

The announcement of the projects invariably brought a flood of applications from families throughout the region where the community was to be situated. A set of qualifications therefore had to be worked out. As finally adopted, successful applicants were those meeting the following requirements: American citizens, married and with children, between 21 and 55 years of age, preferably with some agricultural experience, and with annual income between $800 and $1,200.

It appears, on the basis of the study of the 9 projects, that the families selected came in with a feeling of pride as a picked group and with a high degree of enthusiasm. Glowing newspaper accounts, however, and unauthorized statements of the privileges and benefits to be provided gave many of the new settlers an exaggerated idea of what they could expect. Many visioned an easy life with all the comforts, at little or no expenditure of effort. When, after long delay, in some cases, they moved into their new homes half-finished and under pioneering conditions, some lost at least part of their enthusiasm.

The long interval before a purchasing scheme was finally worked out dampened the ardor of others. After the 40-year plan was adopted, there was widespread criticism of the length of the period, as the homesteaders felt that none would survive to be owners. The period was later reduced, and purchasers desiring to do so were in some cases eventually enabled to complete purchase within as little time as 5 years. It appears, however, that in the projects studied, comparatively few actually took advantage of the opportunity to make larger payments and reduce the term of amortization.

Much of the disappointment and disheartenment apparently arose from undue expectations on the part of the homesteaders. Although some of them charged "broken promises" on the part of the Government, this charge did not stand up under investigation. However, the recurring changes in organization of the Federal agency and the consequent changes of policy left the homesteaders in many cases with a feeling of uncertainty as to their position, and in some with suspicion of the good faith of the administrators. On some projects where delays were fewer, and where the aptitudes of the people were well adapted to subsistence gardening (as in El Monte, Longview, and Granger), the project apparently was successful from the start. Even in most of those projects where the early difficulties were greatest, however, the people had become adjusted by the time of the study and felt that the housing project was a complete success, even though comparatively little use was made of the subsistence features.

Investigators' Appraisal of Subsistence-Homesteads Program

The investigators found that, as a housing program, the subsistence homesteads were a success. Even allowing for the necessarily waste-

ful use of relief and PWA labor, well-planned, well-built houses were provided at moderate cost.

The evidence indicated, however, that they did not reach the group at which the program was directed—families with a total income not exceeding $100 a month. Although the original selectees fell within this category, it was the experience at all the projects studied that, wherever original homesteaders fell out and others took their places, the emphasis (usually with the approval and even the insistence of the homesteaders—especially where there was a homestead corporation responsible for payments) was placed on security of payment rather than on assistance to low-income families. As a result, the average income level of the homestead groups has steadily risen.

In the opinion of the investigators, the homesteads "do not justify the confidence that many people have placed in them as a relief measure." Experience on the projects studied indicates that they "do not provide relief and do not eliminate the need for it."

The subsistence-gardening feature of the program appears to have been utilized the least. Where families were large and there was a background of land experience (as in the El Monte and Longview projects, and among the people of European peasant stock at Granger Homesteads) the families made considerable use of their land to raise food not only to eat but also to sell. In most of the projects, the use of the ground varied from flower culture (and no vegetable raising) to a small kitchen-garden plot; the rest of the ground lay idle. In Jersey Homesteads and in some of the southern projects, it appeared that the homesteaders tended to hire Negro labor rather than to work the land themselves. In nearly all the projects, such vegetable growing as was done was used to reduce cash expenditure for food, and the money thus saved went for commodities that could otherwise not have been afforded. This "indicates that subsistence homesteads are more commonly used by their occupants to raise the level of living than to maintain a given level while decreasing cash expenditures." The experience seems to prove that a subsistence homestead will be small comfort to a family whose normal income of, say, $1,500 a year has been reduced to $400; it may make possible better living than would otherwise be possible, but will not long be satisfactory. Almost no family is able to pay for a homestead out of a cash income of even as much as $1,000 a year, without subsidy.

The report comments that the subsistence homestead "is no stabilizer of standards of living" and does not keep people from wanting to raise their level of living. "People who, when they are hungry, believe they will forever be happy on just a crust of bread, may decide they want butter and jam too when they feel sure of the crust."

Smaller land allotments, it appears, would serve the average family better. The investigators concluded that a plot of 1 or 2 acres is preferable in general to one of 4 acres or more. Also, they believe that the facilities for gardening, as well as information and advice, should be made available, but that there should be less official emphasis and no insistence on subsistence activities.

Post-War Possibilities

The report points out that the opportunity for gardening as a leisure-time pursuit is one that is widely popular. Should the developments of the next few years bring about a dispersion of industry

through the small towns, the writers believe that the possibilities of subsistence homesteading will be enhanced—but as a pastime, not as a serious productive effort. Such a development is, in fact, already taking place and is particularly suitable as a combination of rural and urban living, and as a combination of steady employment involving seasonal lay-offs (or year-round part-time work) with part-time farming for home consumption or commercial sale or both.

The investigators were unanimous in their belief that the desire for subsistence homesteading is greatest in times of depression and declines as economic conditions improve. From their study of the developments in the projects as times improved, the investigators concluded that subsistence homesteading, with great emphasis upon subsistence production, is regarded by most people not as a permanent way of life, but as a temporary expedient with which to tide over until better times. "As cash income increases, they prefer to use their leisure time, so far as they have any, for other purposes than the reduction of cash food costs."

Assuming that subsistence gardening is "best adapted to situations of part-time employment and comparatively low income," the possibilities of expansion of subsistence homesteads seem to depend on the extent of part-time employment providing incomes up to $1,200 or $1,500 per year. With full employment and adequate incomes the demand for subsistence homesteads will be appreciably smaller; with depression, on the other hand, it will be measurably greater.

The report expresses the opinion that subsistence homesteads are not the answer to any economic problem of first magnitude. They are not an attack upon the underlying causes of "unemployment, partial employment, insecure employment, and only partial use of industrial resources and possibilities." They represent "a treatment of the symptoms as distinguished from a treatment of the causes." The homesteads provided under the Government schemes of the depression years served "only to ameliorate the difficulties of low income and to improve to a limited extent the living conditions of low-income people." Further, they were plagued, after their establishment, by the same basic economic ills that gave rise to a demand for them.

The opinions, needs, and customs of the persons for whom the program is designed need to be gauged more accurately than was the case in the recent program. Another program will be justified only if it provides facilities and opportunities wanted and needed by the people themselves.

Data are needed as to the number, by occupation, of people partly employed or employed at low wages, and whether they are scattered or concentrated in given areas. If it appears that there is sufficient need and demand, consideration should be given to mapping a program under which a high turnover will be viewed with equanimity and which will be designed to meet a condition of instability, "since apparently subsistence homesteading represents an unstable unadjustment." Finally, some estimate is needed of the number of people who prefer subsistence homesteading as a permanent way of life.

Most of the investigators were of the opinion that subsistence homesteads constitute superior housing projects and that, with or without their subsistence features, could very well be incorporated in a postwar housing program and serve as models.

Recommendations of Investigators

No formal set of recommendations was made in the report. The following summarizes the various points made by the investigators, largely in tentative terms:

No effort should be spared to make clear in advance to the homesteader "precisely what he may expect and specifically what he may not hope for."

Policies relating to the homesteads should be consistent and, as far as possible, unchanging. "Any change in policy that can be conceivably or even falsely construed to be to the homesteaders' disadvantage is extremely hazardous. Planning and consideration of all contingencies should be complete enough, sure enough, and done long enough in advance, to minimize as much as possible the need for changes in policy. When changes must be made they should be so fully and carefully explained that the reason for them becomes almost self-evident." Many of the conflicts that occurred in the projects studied would not have arisen, given "a clear-cut program with at least definite general policies and objectives."

The economic base for the support of the community—the employment from which the homesteaders will draw their income—should be provided for in advance, not after the homestead community has been established. Also, the employing industry should be within easy commuting distance—"easy in terms of time, of cost, and of convenience."

The homesteads should not be regarded as relief measures or as a substitute for them. They will assist in ekeing out a reduced income but will not make ownership possible—at least at the level of housing provided on the projects studied—even with an income as high as $1,000 a year. Below that amount, either the facilities must be of lower grade or subsidy must be provided in some form to make up the difference between actual cost and the homesteaders' ability to pay.

"The subsistence-homesteads pattern has within it many practical elements that could be repeated and extended." There is widespread desire for "decent low-cost houses * * * for enough land to dig in, to have trees, grass, flowers, small vegetable gardens, possibly poultry, possibly even space for a cow—above all, elbow room and a wholesome and healthy place to rear children." The plot of land, however, should not exceed 1 or 2 acres, instead of the average of 4 under the present plan.

Facilities for gardening, and even information and advice, should be made available for those who want to make use of them, but there should be less official emphasis (and no insistence) on subsistence activities. Management functions, once construction is finished, should be confined mainly to rent collection.

Direct sale of homesteads to the settlers is favored, with regulations to prevent speculation and deterioration of the property.

There should be no attempt to differentiate the homestead community from the larger community around it.

Organizations, cooperatives, and community houses should develop from the desires and activities of the settlers themselves; they should not be imposed by the planners of the program.

Cooperation

Developments in the Cooperative Movement in 1943

THE spectacular expansion by cooperatives into production in 1943 overshadowed other developments in that year. According to the Cooperative League, some $14,000,000 was invested in productive facilities of various kinds in this one year. By far the greater part of the money went into the purchase of petroleum refineries, pipe lines, and oil-bearing lands. Other acquisitions included a printing plant, a coffee-roasting plant, a cannery, a dehydration plant, a chemical factory, five sawmills,[1] two feed mills, and a number of other plants related to agriculture and its products. These purchases were made almost entirely by regional wholesale associations, individually or in combination with other wholesales.

Among the local cooperatives the outstanding feature of the year was the number of new food stores opened by new associations, by store organizations previously in existence, and by petroleum associations which were diversifying their activities. The many problems entailed by the war were being overcome fairly well and, notwithstanding the poor supply situation, volume of goods handled and amount of sales made appeared to be increasing.[2] The greatest difficulty appeared to be that of obtaining and retaining trained workers, especially for the more responsible positions.

Cooperatives were the subject of a number of court and administrative decisions during the year, and were on the whole successful in these, as well as in the legislative measures enacted.

Steps were taken to bring about closer relationships between the credit-union and consumers' cooperative movements, and between the latter and organized labor. Much greater attention was paid to publicizing the cooperative movement than in any previous year, and this was assisted by several attacks upon the movement which resulted in gaining it greater public notice.

Evidence of the widening horizons of the consumers' cooperatives in this country was given in their increasing preoccupation with postwar conditions and the part that cooperatives can play in the rehabilitation of cooperative movements abroad. Conferences with representatives of these movements in the fall of 1943 and early in 1944 explored the practical steps to be taken by cooperatives in this country in the relief and reconstruction of associations in war-torn countries. The formation of an International Cooperative Trading and Manufacturing Association, through which this help will be extended, was authorized.

[1] Early in 1944 it was reported that a shingle mill had also been purchased, in Vancouver, B. C.
[2] Data on operations of consumers' cooperatives in 1943 will appear in a later article.

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Laws and Decisions Affecting Cooperatives [3]

Some of the more important legislation and decisions affecting cooperatives, that occurred in 1943, are summarized below.

In Massachusetts, the cooperative associations endeavored to have the "blue sky" law amended, to permit them to sell shares to their members under the same provisions as those governing credit unions and "cooperative banks" (building and loan associations). The amendment passed both houses of the legislature but was vetoed by the Governor on the ground that the amendment was too broad. The cooperatives then appealed to the State Public Utilities Commission for exemption. That commission had not yet rendered a decision at the time this article was prepared.

The North Dakota Legislature passed a law (Acts of 1943, ch. 237, p. 332) requiring State teachers' colleges and the teachers' college at the State University to offer an elective course covering "cooperatives and other business methods, their history, principles, organization and operation." This course is to carry the same credits and be rated in the same manner as other courses offered by these colleges. A similar law, applying to high schools, was passed in 1937.

In Ohio many of the farmers' associations incorporated under the Ohio cooperative marketing act also carry on purchasing of consumer goods as well as of farm supplies. For this reason it is of interest here that the act was amended in 1943 (H. B. 400) to permit the associations to provide, in addition to merchandise and marketing service, other services except "professional services otherwise prohibited by law." The amendment also permits any farmer to become a member of an agricultural cooperative, instead of (as formerly) only those who are marketing products through it. A proposed provision which would have allowed the return of patronage refunds to nonmember patrons as well as to members was defeated (according to the Ohio Farm Bureau News, June 1943) by the opposition of private coal and hardware dealers.

An attempt was made in Wisconsin to kill that part of the State act which made it compulsory to include consumers' cooperation in the curriculum of all State-aided educational institutions.[4] The bill, which it was stated had been introduced at the request of certain trade associations, was later withdrawn.

In the 78th Congress of the United States a bill (S. 1122) was introduced by Senator Ellender which proposed to limit all auto tire and tube distribution to independent dealers and farmers' cooperatives that were in operation before June 1, 1942. Although the measure was aimed at concentrated business, under its language neither farmers' cooperatives formed after that date nor urban cooperatives whenever established could engage in the retail distribution of tires or in their production. Upon protest by the cooperatives, Senator Ellender agreed to rewrite the bill so as to exempt cooperatives specifically from the prohibitions.

The Guffey Coal Act expired on August 26, 1943, when Congress failed to extend it. Under that act the Bituminous Coal Commission had ruled that patronage refunds of cooperatives would constitute an illegal discount under the law, and refused to recognize consumers' cooperative wholesale associations as coal dealers.

[3] See also page 559 for Arizona decision affecting war relocation cooperative.
[4] For a summary of the act see Monthly Labor Review, October 1935 (p. 991).

COLD-STORAGE ASSOCIATIONS

Uneasiness was expressed in Nebraska[5] over the passage of a law (L.B.51) providing for the licensing and regulation of cold-storage plants. It was pointed out that its effects upon the possible extension of cold-storage lockers by cooperatives would depend on the regulations adopted by the State Department of Agriculture, and that regulations calling for a showing of "public convenience and necessity" could very well be used to prevent the formation of additional cooperative plants. The law also calls for annual renewals of licenses. Similar laws were passed in Indiana (ch. 264) and Ohio (H.B. 206) in 1943.

MEDICAL-CARE COOPERATIVES

On January 18, 1943, the United States Supreme Court affirmed the decision of the United States Court of Appeals for the District of Columbia, holding the District Medical Association and the American Medical Association guilty of conspiracy against Group Health Association, and levying fines upon both physicians' organizations.[6] The Supreme Court decision held that the cooperative was engaged in business or trade; it was immaterial whether physicians and medical societies are so engaged, as the Sherman Antitrust Act prohibits "any person" from imposing restraints on trade, irrespective of whether he is himself engaged in it. The Court found that the dispute between the cooperative and the medical societies was not one concerning terms of employment, and the societies could not therefore claim immunity under the laws designed to exempt labor unions from the application of the Sherman Act. The Court concluded: "These independent physicians, and the two petitioning associations which represent them, were interested solely in preventing the operation of a business conducted in corporate form by Group Health." It therefore affirmed the decision of the Court of Appeals. (*American Medical Association* v. *United States*, 317 U. S. 519, 613.)

A bill introduced in the Wisconsin Legislature in behalf of cooperators, which would have forbidden discrimination against either physicians or patients participating in a medical-care cooperative, was defeated.

BURIAL ASSOCIATIONS

Iowa is one of the few States having cooperative associations providing complete funerals (including embalming) or selling caskets and funeral supplies. These associations are organized under the consumers' cooperative law of the State which permits cooperatives, among other things, to conduct a mercantile business; it does not specifically authorize funeral service. Some funeral associations—especially the larger ones—employ the full-time services of an embalmer who acts as funeral director. The associations have generally been quite successful, have reduced the cost of burial to their members, and have expanded in membership. Several now have in membership over 1,000 families each. In 1937 the private funeral directors obtained an amendment to the State law which regulates the licensing and practice of embalming (Code of Iowa, 1939, ch. 124.1, secs. 2585.01–2585.09). The code specifies who shall be considered as

[5] Nebraska Union Farmer (Omaha), May 26, 1943.
[6] See Monthly Labor Review, March 1942 (p. 685) and March 1943 (p. 500) for summaries of the decisions of the courts.

embalmers, and as amended (Acts of 1937, ch. 106) continues (italics show amendment) as follows:

"It is further provided that nothing in the provisions of this chapter shall apply to any person, firm, or legally established funeral home *other than cooperative burial associations*, except that each such legally established funeral home shall comply with the provisions of this chapter as to State control, licenses, and license fees, engaged in the undertaking business on July 4, 1935." It is evident from this that corporations ("firms") were not affected by this amendment unless they were also cooperatives; in other words, not corporate practice but cooperative practice was aimed at.

About the middle of 1943 the funeral cooperatives were attacked by the State attorney general in an "ouster" suit, maintaining that they were doing business not authorized by cooperative law, and violating the embalming law by engaging in the practice of embalming. In the first case to be heard, the association concerned was an organization serving about 1,100 families in three counties; its embalming was done by a licensed embalmer whom it employed full time. The case was dismissed by the court on June 29 and in August the attorney general withdrew the charges against the remaining associations. However, a month later he brought suit against two other large associations. No report has been received as to the outcome of these cases.

In Kansas the consumers' cooperative law permits cooperative associations to undertake "any business or industrial pursuit," but the embalmers' and funeral directors' law (Gen. Stats. 1935, secs. 65–1701 et seq. and secs. 74–1702 et seq.) was amended in 1941 (ch. 297) to prohibit corporate practice in the undertaking field, even though the embalming is done by a licensed embalmer. The amended law provides for the examination and licensing of embalmers and funeral directors. Undertaking establishments (funeral homes) may be operated only by individuals who are either licensed embalmers or funeral directors; if the funeral director is not himself an embalmer he must employ one. The law states that no funeral directors' license shall be issued to "organizations, institutions, corporations, or establishments" and specifically prohibits embalmers or funeral directors from "using, participating in, selling, promoting, servicing or operating, directly or indirectly, any burial association." A cooperative association organized to operate a funeral home was denied a charter on the ground that this would be illegal. In 1943 a bill was introduced in the Kansas Legislature which would have specifically authorized the chartering of nonprofit cooperatives if a licensed funeral director was employed. The bill was killed in the house of representatives committee on State affairs.

A law was passed in 1943 by the Wisconsin Legislature, prohibiting the sale, in connection with a funeral establishment, of shares or membership or other certificates providing for "burial benefit or any rebate at time of death to the holders thereof." (Wis. Stats. 1943, sec. 156.12 (7).)

ELECTRICITY ASSOCIATIONS

The right of the rural electricity associations to extend their service into the villages was challenged in two cases before public utilities commissions of Arkansas and Oklahoma. The suit in each case was brought by a private utility corporation.

The cooperatives were buying from these corporations energy which they distributed through their own power lines to their members. Although the contracts in force between the corporations and the cooperatives are reported to have made no distinction between individual and industrial uses, the corporations contended that the cooperatives should confine their activities strictly to farm users and stay out of the villages. They therefore applied for permission to charge a higher rate for energy resold by the cooperatives in villages of over 250 population or to industrial consumers using over a specified amount of current.

The Arkansas commission ruled that the cooperative in the case was entitled to the same rate on power distributed in towns as in the country, except for the larger consumers on which it should pay a higher rate to the utility company.

In Missouri the Public Service Commission gave the Sho-Me Power Cooperative (a federation of 29 of the 31 cooperatives in the State) permission to buy the properties of a private power company. The right of the cooperative to do so was contested by 14 other power companies in Missouri, the main ground being that this purchase by the cooperative association was a first step in the socialization of the electric-power industry of the State. The Commission found no evidence of this and noted, in passing, that none of the intervening companies had made any move to purchase the properties concerned (which the owning company had been ordered to dispose of) and, as stated above, granted the cooperative permission to buy them.

The 1942–43 annual report of the Rural Electrification Administration notes the passage of an enabling act in Vermont, making it the twenty-seventh State to adopt legislation authorizing the formation of electricity cooperatives.

New Associations and Services—Local Cooperatives

A very decided expansion in local cooperative distributive and service associations took place in 1943. The crop of new associations appeared to be somewhat larger than usual and many existing associations opened new branches. The mergers of existing associations that took place in a number of communities represented not restriction of services but a move to strengthen cooperative organization.

The greater part of the new facilities were stores, opened either by existing store associations or by petroleum associations which were diversifying their business. The petroleum associations, as noted in previous reports, had closed some of their branch service stations as early as 1942 when they began to be affected by scarcity of rubber and rationing of petroleum. Additional branches were closed in 1943, but the tendency to expand into other businesses, notably the sale of food, continued. Not so many new petroleum associations as stores were started in 1943, but there were a few, and several that had previously been branches of other organizations became independent associations.

All parts of the United States shared in this spread of the cooperative idea in 1943. An active interest in cooperation was reported to be resulting in the formation of a group of stores and buying clubs in and around Seattle. That city, which contained a thriving cooperative movement in the period 1918–20, is the headquarters of the Grange cooperatives in the State but, since the collapse of the early movement

in the depression of 1921–22, has been more or less of a desert as regards urban associations. The new associations formed in 1943 and the few organizations already in existence (including a large students' association and 2 store associations) have formed a league to carry on educational work in the territory.

Late in 1943 the national Cooperative League reported that at least 91 new food stores had been opened by existing or new cooperative associations in the territory of its regional affiliates. Nearly three-fourths of these new stores were in the Midwest, where expansion from petroleum to food is going forward apace. In many cases the cooperative bought or leased the business of a local private merchant. Several retail store associations bought from local dealers their feed stores and fuel yards. In Indiana, it was reported, 35 county-wide Farm Bureau cooperatives had opened shops to service and repair farm machinery.

One unusual development noted in 1943 was the taking over, by the cooperative in one of the "greenbelt" towns, of a local tavern formerly run privately. Avoidance of sale of intoxicants was one of the most vigorously practiced tenets of the Rochdale Pioneers and a number of the early associations in the United States had the promotion of temperance as one of their aims. Although not now stressed, very few associations in this country carry alcoholic drinks. As far as known to this Bureau there are only four, three of which run taverns. Two of the four are Italian cooperatives; it may be that others of the Italian group also handle intoxicants.

A feature of the year's developments, which was encouraging to cooperative leaders, was the improved financial structure of the movement, brought about by the widespread use of earnings to increase capital. Another was the greatly reduced extension of credit by cooperatives. On the other hand, leaders were noting with some alarm the tendency toward larger inventories, purchased at war prices, which will cause losses when the post-war decline in prices occurs.

One cooperative, which for many years has operated a number of cafeterias, opened one grocery branch in 1943 and plans a number of others for 1944. On the other hand, a store association in Montana opened a restaurant in 1943.

Another, in North Dakota, bought from the local undertaker his funeral home, in preparation to supplying complete funeral service; the store association had previously carried caskets, but provided burial only on a contract arrangement.

Among the burial associations, most of the expansion took place in Wisconsin. Two new associations were formed there, one of which was of the federated type. In another locality three local associations joined in sponsoring cooperative funeral service, to provide which the store association opened a mortuary department. Another existing association opened a branch in another town and plans a second during 1944. In the Philadelphia area cooperatives arranged for funeral service on a contract arrangement with a private undertaker. In Minnesota a service federation which acts as an educational body but also writes insurance and operates a funeral department, in 1943 opened a second funeral establishment.

The year 1943 was notable for the formation of a cooperative telephone association, to serve patrons in four towns of Minnesota; few associations of this type have been started in recent years. Several trucking associations were established and at least three recre-

tional associations. In Minnesota a service organization was formed which expected to begin operations in January 1944, carrying on a cold-storage and slaughtering business. Another cold-storage locker association was started in Texas and in California a store association opened a locker department. Several other associations in various parts of the country authorized their boards of directors to undertake this new type of service in 1944.

For 1942 it was noted [7] that some of the campus cooperative houses for male students were being forced to close, as their members left college to join the armed forces. This trend appears to be still going on but is counteracted, to some extent at least, by an increase in the number of cooperative housing associations for girl students. In some cases the girls have taken over and are operating the houses formerly run by the young men's groups.

At least three Negro cooperatives were started in 1943; two of these were buying clubs and the third opened a store. It is reported also that cooperative associations were organized in a number of low-cost housing projects during the year, but the Bureau has been able to get little direct information regarding them. In Alabama a cooperative store was started by sharecroppers; this was reported to be the first such venture among this group.

Early in 1943 cooperatives of various types were reported to be in operation in all of the 10 war relocation centers. The 109 associations included food and general stores, shops providing dry goods, shoes, and shoe repair, beauty parlors, barber shops, laundry and dry-cleaning establishments, optical service, and motion-picture theaters. These associations were started without share capital, on credit advanced from various sources. Capital accumulated had by April 1943 ranged in the different associations as high as $29,000. The associations were being supervised in their business transactions and cooperative educational work by veteran cooperators from the consumers' cooperative movement. It was reported, in June 1943, that the articles of incorporation of one of these Japanese-American associations (at Rivers, Ariz.) had been canceled by the Arizona Corporation Commission on the ground that although the association had been incorporated under the nonprofit law, its articles of incorporation provided for return of patronage refunds to the membership. The commission ruled that this provision removed the association from the nonprofit category of "nonprofit corporation as contemplated by our laws."

The rural electricity associations, which had been halted in their expansion by WPB restrictions on wire and other critical materials, expanded somewhat as the restrictions were relaxed.[8]

MEDICAL CARE

At the beginning of 1943, as noted, the medical-care cooperatives received the encouragement of the decision of the United States Supreme Court. The cooperative organization involved, Group Health Association of Washington, D. C., although hard hit by drafts upon its professional staff, nevertheless increased its membership from 3,375 at the end of 1942 to 3,566 in December 1943. At the end of 1943 some 9,200 persons were being served by the association.

[7] Monthly Labor Review, April 1943 (p. 709, footnote 5).
[8] For detailed data on these associations, see Monthly Labor Review, February 1944 (p. 326).

This association, which provides both medical and hospital care, has its own medical staff of general practitioners and specialists and operates its own pharmacy. Its total business in 1943 amounted to $281,942, of which $82,800 represented the pharmacy's sales. At the end of the year the directors announced a plan calling for expansion of the clinic facilities and for the installation of dental service on a small scale, starting with 2 units (capable of serving 1,000 persons each) and expanding to 3 or 4 units by the end of 1944. These plans for expansion were submitted to the membership for consideration.

Two prepayment medical-care associations—one in New York and the other in Minnesota—both of which contract for medical service from private physicians, reported considerable growth during 1943. The former has a panel of some 2,500 physicians serving its members at a cost of about 2¼ cents per day; the plan covers 5 counties as well as the city of New York. Optical service also became available to cooperators in the New York metropolitan area, under a contract arrangement made by the Eastern Cooperative League.

In Oklahoma a cooperative hospital association, organized in 1942, opened its hospital in July 1943; this is the second cooperative hospital in Oklahoma and can be said to have been inspired by the first association, which has been in successful operation for over a decade. Another hospital association (in Texas), which started giving medical care in a small way in 1941, completed the first unit of its hospital in 1942 and added another wing in 1943. In Wisconsin an association was being organized late in 1943 and expected to take over the local hospital in January 1944.

At the end of the year there were in operation three cooperative hospitals and another—at Hardtner, Kans.—that could be termed at least semicooperative. The oldest of these, at Elk City, Okla., which was started in 1929, provides not only hospitalization but also medical, dental, and optical care, and drugs.

INSURANCE

The distributive and service cooperatives of Minnesota and Wisconsin have a companion movement in the six insurance associations of those States, most of which they helped to organize. In general, the cooperative stores are agents of the insurance associations[9] and write policies for all the kinds of insurance handled by the various insurance associations. Democratic control is insured both by direct representation of policyholders and by delegates to annual meetings, chosen by the local cooperatives.

A tendency toward unification and coordination of the insurance service in these two States has been under way for several years, and further strides were taken in 1943.

In 1941 the insurance associations in Minnesota and Wisconsin, with the help of Central and Midland Cooperative Wholesales, formed Cooperative Insurance Services. The purpose of this organization was to coordinate the insurance program, provide a common field force of agents writing life, automobile, and fire insurance, and give financial assistance where needed. Eventually, it was planned

[9] In a meeting in February 1943, delegates at the annual meeting of the Cooperative Insurance Mutual and Cooperative Life Mutual (both in Wisconsin) voted to allow individuals also to become agents authorized to write policies.

that this association should become a joint management agency for the affiliated insurance cooperatives. Four of the six insurance associations in Minnesota and Wisconsin [10] became members of Cooperative Insurance Services. The final step in realization of the plan came in September 1943 when the two remaining associations [11] joined. As soon as possible, arrangements were to be made for joint sales, actuarial and underwriting, claims, and accounting departments, and a single general manager chosen by the boards of directors of the six groups.

In these two States cooperators now can obtain health, life, accident, fire, and windstorm insurance through their local store associations. Many associations take out group insurance for their employees, also; the Cooperative League News Service reported in September 1943 that 77 consumers' cooperatives in Minnesota had such policies. In addition, an unusual kind of insurance is being offered by a growing number of local cooperative associations—patronage group life insurance. Under this plan the family of a cooperator who dies receives insurance proportioned in amount to the family's patronage at the cooperative store during the preceding year. Early in 1943 it was reported that 29 Wisconsin cooperatives and 15 Minnesota associations had this kind of insurance.

In Ohio the Farm Bureau Mutual Automobile Insurance Co. was reported to have become the fourth largest mutual organization insuring automobiles in the United States and the largest insurer in the State. At the end of the year the various Ohio Farm Bureau insurance companies (writing workmen's compensation, life, accident, fire, and casualty risks) were operating in 12 States (Connecticut, Delaware, District of Columbia, Maryland, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia).

Developments Among the Federations

COMMERCIAL ORGANIZATIONS

The chief development among the cooperative wholesale associations consisted of the spectacular expansion of the productive facilities by both national and regional organizations. Some new lines of goods or of services were also added during the year.

Expansion by national or joint enterprises.—The Cooperative Congress of 1940 authorized the formation of a national organization to mobilize the surplus funds of cooperators and their associations and to make these available for aiding new enterprises and existing associations. In March 1943, the board of directors of the Cooperative League signed articles of incorporation for the National Cooperative Finance Association. Its constitutional committee was directed to bring before the 1944 Congress a recommendation for the formation of a general policy board to coordinate the activities of the national League, National Cooperatives, Inc., and the new finance association. Only regional cooperatives will be eligible for voting membership in the new association. Memberships are $5,000 each. The association is capitalized at $200,000 and will not begin to function independently

[10] Cooperators' Life Association (Minnesota), Cooperative Insurance Mutual (automobile, Wisconsin), Cooperators' Life Mutual (Wisconsin), and Central Mutual Fire Insurance Co. (Wisconsin).
[11] American Farmers' Mutual Auto Insurance Co. (Minnesota) and Midland Mutual Fire Insurance Co. (Minnesota).

of the Cooperative League until at least nine regional organizations have joined and paid up their membership share. The first function of the finance association is expected to be that of selling securities, making loans, and handling commercial paper for the regional associations.

Another new association formed in 1943 was the National Cooperative Refinery Association. It will operate the $5,000,000 refinery and oil properties which five regional wholesales [12] joined in buying in the middle of the year. Included in the purchase were a refinery capable of turning out 175,000,000 gallons of refined fuels per year and a 229-mile pipe line.

National Cooperatives, purchasing agency for 16 regional cooperatives, took its first steps into production in 1943 with the purchase of a chemical plant (making cosmetics, shampoo mixtures, and various household products) and a milking-machine factory. The chemicals factory is reported to have paid for itself out of earnings in the first 6 months of operation. The war has occasioned a drastic change in the activities of National Cooperatives. Formerly this organization, which makes master contracts for joint purchase of "co-op label" goods, dealt mainly in electrical appliances, auto tires and accessories, steel fencing, and various other supplies. War conditions have either wiped out or seriously reduced the business in these items. On the other hand, the grocery purchases, formerly relatively small, suddenly became the most important line of business.

The National Farm Machinery Cooperative at Shelbyville, Ind., owned by 13 regional wholesales, was formed to manufacture farm tractors, but since the war has been in war production. In 1943 it purchased a privately owned farm-machinery plant, all the output of which had previously gone to cooperatives anyway. The plant was merged with the Shelbyville plant and will make various tillage tools. Later in the year a cultivator plant was also bought, at a cost of approximately $1,000,000.

The Farm Bureau Milling Co., an organization owned by the Illinois Farm Supply Co., Wisconsin Farm Bureau Federation, Michigan Farm Bureau Services, and Indiana Farm Bureau Cooperative Association, was formed in 1926 to do purchasing and provide laboratory service. In 1943 it launched into production by leasing a feed mill.

In December, steps toward joint buying of commodities over a 4-State area were taken with the calling of a conference representing Grange Cooperative Wholesales in Idaho, Montana, Oregon, and Washington. The conference recommended that a joint purchasing agency be established, and later a central accounting office. It was stated that there was no immediate prospect of a central warehouse. Details of organizations were to be worked out later.

In the Minnesota-Wisconsin area, Central Cooperative Wholesale and Midland Cooperative Wholesale have worked out a joint insurance program, have mapped out a system to prevent competition or the overlapping of functions, and have cooperated in other ways. In 1943 the two organizations hired an educational field worker to serve in the "borderline" area in western Minnesota. Later in the year a

[12] Central Cooperative Wholesale (Superior, Wis.), Midland Cooperative Wholesale (Minneapolis), Farmers Union Central Exchange (South St. Paul), Consumers' Cooperative Association (North Kansas City), and Farmers Union State Exchange (Omaha).

conference of CCW and Midland educational workers was held to discuss mutual problems.

Expansion by individual regional and district wholesales.—In Colorado, where the Farmers' Union in 1941 embarked upon a program for the wholesale supply of its affiliated cooperatives, a marketing association was started in 1942 which also does purchasing of supplies. Another step in the program was taken with the acquisition in 1943 of two sawmills and a central plant and the formation of a subsidiary, the Farmers' Union Lumber Co., to operate them.

Central States Cooperatives (Chicago) moved into a larger building and undertook the handling of fresh fruits and vegetables. Central Cooperative Wholesale (Superior) also expected to resume this line of merchandise on January 1, 1944, taking it over from Cooperative Terminal.

The Indiana Farm Bureau Cooperative Association bought 2 lumber mills in 1943, capable of producing about 17 million board feet of lumber, and some timber land. It also became a joint owner (with the Farm Bureau Mutual Insurance Co.) of a printing plant large enough to meet the owning associations' needs and to do some work for other cooperatives also.

A refinery with a capacity of 4,500 barrels of crude oil per day was bought by Midland Cooperative Wholesale. It was estimated that the refinery would supply about 40 percent of the gasoline, all of the kerosene, and about half of the distillates needed by the wholesale's local affiliates. This wholesale is also a member of National Cooperative Refinery Association and will share in the petroleum produced by its refinery. Midland also acquired a feed mill with a capacity of about 10 carloads of mixed feeds daily and equipment for the manufacture of breakfast cereals.

Another entrant into petroleum refining was the Farmers Union Central Exchange, which bought a million-dollar refinery. Although this plant has a productive capacity of about 96,600 gallons of gasoline per day, plus codimer (a component of aviation gasoline), the wholesale stated that it would furnish supplies for less than half of the area served by the association. The wholesale, however, will also get supplies from the National Cooperative Refinery Association, of which it is a member.

Consumers' Cooperative Association, the pioneer in the production field, accelerated its expansion rate in 1943 with the formation of a finance association; the purchase of a second cannery; construction of a dehydration unit in the first cannery; acquisition of 80 million feet of standing timber and a second sawmill with annual capacity of 14 million board feet, to serve some 250–300 cooperative lumber yards in the 10 States of the wholesale's territory; a feed mill producing 75 tons per day; and a group of properties including a petroleum refinery producing 81 million gallons of refined fuel annually, a 10-million-gallon lubricating oil refinery, 270 oil wells, 768 miles of pipe line, and leases on 104,408 acres of oil-bearing land. A furfural plant to improve the quality of the lubricating oil was put under construction. Four new oil wells were brought in, in Kansas and Texas, which, added to the 12 it had at the end of 1942, brought its total number of wells to 286. At the end of the year the association therefore owned 3 refineries, 2 canneries, 2 sawmills, a feed mill, a bottling plant for

soft drinks, an insurance agency, a paint factory, grease factory, printing plant, fly-spray factory, and 2 oil-compounding plants, in addition to an interest (as member and part owner) in the refinery facilities of the National Cooperative Refinery Association, in the farm-machinery plants of the National Farm Machinery Cooperative, and in the chemical factory and milking-machine plant of National Cooperatives. It was stated that the petroleum-products facilities should be sufficient to supply the entire requirements of CCA's affiliated associations. The association's annual meeting endorsed a further program including a central testing and research laboratory and additional productive units.

The Missouri Farmers' Association, a farm organization with a number of commercial subsidiaries, announced the purchase of a petroleum refinery, 115 miles of pipe line, land, storage facilities, etc.—a $321,500 transaction.

Eastern Cooperative Wholesale, which in 1943 purchased a building reported to be one of the 10 largest wholesale grocery warehouses in New York City, soon after its removal to the new quarters [13] installed a coffee roaster with capacity of 500 pounds in a single roast.

The Ohio Farm Bureau Cooperative Association and Consumers Cooperatives Associated (Texas) each bought a grain elevator, including also a flour and feed mill; and a 7-story seed-treating and processing plant was acquired by the Pennsylvania Farm Bureau Cooperative Association. The Pennsylvania association also had under way a soybean crushing mill and a plant for blending vegetable dusts.

In the State of Washington the State Grange formed a new association, the Chemurgy Cooperative, which built and put into operation a plant for the manufacture of glucose syrup. It had previously purchased a starch-glucose factory. These steps were taken as part of a plan for creating processing units "to convert low-grade and cull farm products into starch, glucose, and other war-needed commodities." [14] The financing of a third plant was under way at the end of the year.

In the same State, Pacific Supply Cooperative, an open-membership association,[15] bought two seed-cleaning plants. This organization became a member of the National Cooperative Refinery Association, entitling it to a share in the products of that association, and it then disposed of its holdings in a privately owned refinery.

There is increasing recognition of the value of research to cooperatives. In Wisconsin the board of directors of Central Cooperative Wholesale recommended to the annual meeting the establishment of a research department under a full-time specialist, to "study and work out details of fields and projects into which CCW might expand most advantageously." [16] Funds to create a research and service bureau were made available to National Cooperatives by the Filene Good Will Fund. The president of Consumers Cooperative Association, an organization which is spending $10,000 a year, for 5 years, on research, declared in an editorial:

* * * regional cooperatives engaged in manufacture must begin to do increasingly what other corporations have been doing for many, many years;

[13] This was the association's third move since 1936, each of which was forced by the need for more space. In the same period 2 branch warehouses (in Boston and Philadelphia) were opened.
[14] The Grange News (Seattle), November 6, 1943.
[15] As contrasted with associations auxiliary to a general farm organization which admit into voting membership only cooperatives of members of the sponsoring farm organization.
[16] Cooperative Builder (Superior), February 25, 1943.

that is, to provide more jobs for the best technical brains turned out annually by our colleges and universities.

Nor would I confine research to the physical and mechanical sciences only. The social sciences, in which we as a people are most backward, offer great fields for the specialist. And the findings of such specialists can be of tremendous value to cooperatives. * * *

Research is so important, particularly to associations representing consumers, that regional and national cooperatives should make it one of the next steps in a general advance.[17]

There was much less expansion among the district wholesales than among the regional organizations, the only steps reported being the purchase of a creamery and cheese factory by Northland Cooperative Federation (Rock, Mich.), the entrance of Federated Co-ops of East Central Minnesota into the marketing of timber products, and the addition of a bulk station and a service station by Trico Cooperative Oil Association. The last named referred to its member associations, for study, a proposal by the board that the handling of farm machinery should be the next step in its expansion.[18]

[17] Cooperative Consumer (North Kansas City), February 15, 1943.

[18] Reprint bulletin, to be issued later, will also carry data on educational and service federations, cooperatives and the war, post-war reconstruction, education and publicity, and cooperatives and labor.

Post-War Reconstruction

National Council of Industrial and Commercial Policy in Brazil[1]

THE National Council of Industrial and Commercial Policy, to improve the standard of living and facilitate domestic and foreign exchange of commodities during and after the war, was established in Brazil by decree-law No. 5982 of November 10, 1943, effective upon date of official publication (November 12, 1943). This is stated to be an emergency measure, to meet war contingencies and assist in preparing for the post-war period.

The Council will consist of the Minister of Labor, Industry, and Commerce (chairman), two representatives each of private industry and commerce, one representative each of the Ministries of Finance, Agriculture, Transportation and Public Works, and Labor, Industry and Commerce, and five citizens who have distinguished themselves in political and social sciences. All members of the Council are to be named by the President of the Republic and are to serve in an honorary capacity with remuneration fixed by the decree-law at 1 cruzeiro per annum. The representatives of industry and commerce are to be appointed by their respective confederations, and in the absence of these, by the Minister of Labor, Industry, and Commerce.

The duties of the Council are to consist of the formulation of studies, plans, and recommendations concerning the smooth shifting of Brazilian economy from a wartime to a peacetime basis, the stimulation of industrial and commercial activities of the country, the protection of existing and establishment of new activities (especially the production of essential raw materials), the founding of industries basic to national defense or economy, promotion of domestic and foreign commerce, the restriction of fraud and unfair competition, the coordination of union activities in industrial development, and the elevation of the standard of living. The Council is to prepare drafts of resolutions or decrees containing its conclusions, which will be submitted to the President of the Republic by the Minister of Labor, Industry, and Commerce.

Functions of British Minister of Reconstruction[2]

IN A debate on reconstruction in the House of Lords in December 1943, the newly appointed Minister of Reconstruction, who is also a British War Cabinet member, revealed lines of possible action and stated that, in spite of any pressure from Parliament or the country,

[1] Data are from report of E. Victor Saadeh, clerk at the United States Embassy, Rio de Janeiro, November 29, 1943.

[2] Data are from report by W. J. Gallman, first secretary of United States Embassy, London, December 15, 1943 (No. 12788).

he would arouse no extravagant hopes and make no promises that could not be fulfilled. The main points of his address are given below.

Formulation and execution of plans for reconstruction must continue to be the duty of the departments concerned, working under their ministerial chiefs. The Minister therefore believes his task is "to see the reconstruction plan as a whole, to lay out the various parts which have to be worked out by the Departments, to bring the plans * * * in relation with one another * * * in a word to see that the whole range of preparations is brought into one single coherent whole and that work on these plans proceeds apace." In dovetailing plans the Minister is to have the help of a very strong Cabinet committee over which he will preside. In answer to a question as to the adequacy of his powers, the Minister stated that he had the unqualified support of the Prime Minister and would ask for any additional authority he might need.

The Government can direct, advise, encourage, and control where necessary in the public interest, but it is the people who will have to build the "new world." Plans must be prepared now but action must wait for the close of hostilities.

Reconstruction starts with insuring work for the nation, but homes and food are also prime essentials. If full employment is to be realized, industrialists and traders must undertake broad operations and be willing to cooperate with each other and deal fairly with employees. Although the country will be poor in material wealth for some years to come, faith exists that business can be rebuilt and national life improved. The Government promises administrative action for the diversification of industry. Problems already dealt with include planning for demobilization in an orderly and fair way and measures to obtain the major supplies of food.

The Government cannot promise to reach the proposed objective of 4 million houses and a labor force of 1¼ million construction workers, but plans are being made for adequate expansion of the building industry to meet housing needs. Building is quite certain to be carried on under a system of priorities. No one will be permitted to employ building labor and material to personal advantage and both will be used in the greatest national interest. Primary responsibility for housing policy will continue to be vested in the Ministry of Health, which will approve schemes prepared by local authorities and, as in the past, will carry out a substantial part of the housing program. Full advantage will be taken of the technical knowledge and experience in design and building technique developed by the Ministry of Works during the war. Both of these Ministries are to collaborate with the departments concerned, such as the Ministries of Town and Country Planning and Agriculture, in preparing a manual on housing matters to guide the local authorities. However, "the Ministry of Health will be the single channel of communication between the Government and the local housing authority."

A strong agriculture is also necessary and must be taken into account in any reconstruction plan.

The work done by various committees in studying post-war problems and informing the Government and the people on matters of fact and opinion has been of great service. However, final decisions must be made by the governmental authorities.

Unemployment-Compensation Plan of Radio Corporation [1]

IN January 1943, the Sonora Radio & Television Corporation of Chicago adopted an unemployment-compensation plan. A group of its employees had incorporated as a nonprofit welfare and loan organization under the name, Sonora Boosters Club. The company arranged to pay the club an amount sufficient to establish an unemployment-compensation fund providing benefits of $20 per week for 18 weeks, for all "regular employees" of the company (i. e., those employed full time for at least 60 days). Men and women who were regular employees at the time they entered the armed services are considered as regular employees on leave of absence.

Under this plan, benefits of $20 per week for a maximum of 18 weeks will be paid in the event any regular employee is laid off by the company. Such payment is to begin after exhaustion of the 18 weeks' benefits provided for under the public unemployment-compensation plan. However, if, for any reason the State benefits are not paid, payments from the Sonora fund are to begin immediately. Employees discharged from the armed forces are eligible for benefits of the fund immediately upon their release from the service. In the event that they lose their lives, payment of a sum equal to 18 weeks' unemployment compensation will be made to their next of kin.

All costs connected with the administration of the compensation fund, as well as the costs of the fund itself, are met by the company. No contribution or pay-roll deduction is required from any employee. The intent of the company is that its unemployment-compensation benefits shall equal those of the State. Should the amount payable from the State be increased, the Sonora payment will be increased accordingly.

The plan was undertaken primarily to cover the unemployment which is expected to ensue when the Sonora Co. reconverts from 100 percent war production to civilian production, and is intended to furnish subsistence in the event other work is not available during the lay-off and also to keep the labor force intact if possible. The company believes that "the adoption of a similar plan by employers generally would prevent serious unemployment when the war is ended and during the conversion period." Further, the corporation expects to maintain the fund permanently, in order to cover the periods of seasonal unemployment which have characterized civilian radio production.

[1] Data are from a communication from the company to Bureau of Labor Statistics.

Retirement System for Cuban Sugar Workers [1]

ON March 21, 1941, a law (No. 20) [2] was passed in Cuba which created the Retirement and Social Assistance Fund for Wage Earners and Salaried Employees of the Sugar Industry. Regulations to put the law into force were only recently issued, in decree No. 3383, of November 16, 1943.[3] The system is compulsory and will be supported by contributions from employers, workers, and the Government.

Coverage.—The retirement scheme is to include all employees of the sugar, molasses, and sirup industries and related work. Employees of sugar mills as well as cane planters and seasonal laborers are granted right to benefits. Commercial departments, official organizations, or institutions created for the movement or control of sugar products come within this coverage, as do also foundries the industrial activities of which are at least 80 percent dependent on the sugar industry. Directors and high administrative officials are excluded unless they are also owners, co-owners, or shareholders in the business or company. Employees already covered by private retirement systems may choose between their present system and the new one.

Contributions.—The system will be financed by contributions from insured persons, employers, and the State. The employer is required to contribute 3 percent of his pay roll, and to deduct 3 percent from wages of personnel covered; the Government will contribute unexpended funds that remain from the profits of the 1941 sugar crop and certain additional funds. The decree provides that when the above funds are not sufficient to operate the scheme, the President and Congress are to consider what measures are to be adopted.

Benefits.—Benefits vary according to age, years of service, remuneration, and whether the retirement is for age or for disability. In calculating the number of years of service, only the years since 1928 are to be counted. Retirement benefits will range from 30 to 60 percent of the yearly wages, but the maximum amount receivable under the plan is 150 Cuban pesos.[4]

It is anticipated that approximately one-half million employees will be affected by this retirement system and that about 6 million dollars will be collected annually in premiums.

Administration.—The fund will be administered by a board of 12, the entire membership of which is to be replaced every 4 years, and a director appointed by the Executive. Six members of the board are to be elected by the employers and 3 of the 6 are to belong to the National Mill Owners' Association of Cuba and 3 to the Cuban Cane Growers' Association. Of the 6 worker representatives, 4 are to be workers in the agricultural and industrial sections of the industry and designated by the National Federation of Sugar Workers, and 1 is to represent the technologists of the industry. Board members are required to be of Cuban birth, of legal age, able to read and write, without a criminal record, and with service of not less than 5 years in the sugar industry.

[1] Data are from Trabajo (Habana), November 1943: and report of Paul G. Minneman, agricultural attaché, United States Embassy, Habana, November 24, 1943.
[2] Published in Gaceta Oficial, March 22, 1941.
[3] Published in Gaceta Oficial, November 24, 1943.
[4] Exchange rate of peso in November 1943=$1.00.

Living Costs of Women Workers in New York State, 1943 [1]

WOMEN workers living as family members in New York State in 1943 were found to need $1,211.13 per annum for "an adequate living," according to the annual cost of living survey made by the Women in Industry and Minimum Wage Division of the New York State Department of Labor. In order to cover income taxes, war-bond purchases, and additional social security taxes, the study shows, this figure should be raised to $1,599.91.

Housing and food costs constituted approximately half of the $1,211.13 budget, which excludes the allowance for income taxes and war-bond deductions. The allocation for clothing was $233.85 and that for leisure time activities was $113.80.

Annual Cost of Adequate Budget for Women Workers as Family Members, New York State, 1943

City and population group	Total	Housing and food [1]	Clothing	Clothing upkeep and personal care	Medical care	Insurance [2]	Leisure-time activities	Other living essentials	Income taxes and war bonds
New York State	$1,599.91	$601.12	$233.85	$62.50	$63.99	$45.00	$113.80	$94.76	$384.89
New York City	1,593.22	600.34	232.00	61.15	64.31	44.93	117.04	89.60	383.85
Outside New York City	1,620.77	602.96	238.33	65.75	63.23	45.21	105.96	107.22	392.11
100,000 and over (except New York City)	1,629.96	611.77	239.41	65.92	61.54	45.30	104.46	104.05	397.51
Buffalo	1,655.73	613.61	240.12	66.90	63.72	45.56	104.28	115.10	406.44
Rochester	1,617.43	617.36	243.55	66.42	59.00	45.17	104.74	89.60	391.59
Syracuse	1,613.11	604.34	234.55	64.45	61.90	45.13	104.35	107.45	390.94
50,000 and under 100,000	1,619.59	596.51	238.61	61.43	66.17	45.20	108.44	111.30	391.93
Schenectady	1,649.12	605.50	240.49	62.72	68.48	45.49	110.91	115.10	400.43
Binghamton	1,570.76	565.38	246.47	62.26	65.09	44.71	103.87	107.50	375.08
Troy	1,637.70	618.64	228.88	59.31	64.95	45.38	110.55	111.30	396.69
25,000 and under 50,000	1,622.50	601.58	236.62	64.57	66.05	45.23	109.48	106.60	392.37
Elmira	1,630.03	590.77	243.67	61.73	67.34	45.30	108.60	115.10	397.52
Jamestown	1,565.15	578.36	237.97	66.26	66.76	44.65	106.92	89.60	374.63
Poughkeepsie	1,681.83	635.60	228.21	65.73	64.04	45.82	112.92	115.10	414.41
10,000 and under 25,000	1,634.48	606.66	236.37	67.42	63.89	45.34	106.17	110.43	398.20
Middletown	1,644.71	597.50	244.06	69.45	65.19	45.45	108.10	115.20	398.76
Glens Falls	1,686.83	648.79	237.16	61.59	68.66	45.87	105.18	104.40	415.18
Cortland	1,547.30	555.03	237.06	66.11	60.32	44.47	106.41	110.00	367.90
Oneonta	1,649.41	625.30	227.20	72.51	61.38	45.49	104.96	112.10	400.47
5,000 and under 10,000	1,534.66	548.69	234.80	66.88	61.20	44.35	104.49	108.27	366.98
Norwich	1,571.04	571.34	234.53	68.51	64.08	44.71	104.08	108.27	375.12
Canandaigua	1,555.31	565.57	231.84	68.50	57.17	44.55	106.29	108.27	373.12
Wellsville	1,506.24	528.71	236.93	65.39	64.75	44.06	100.49	108.27	357.64
Penn Yan	1,499.96	529.12	235.91	65.08	58.80	44.00	107.09	108.27	351.69

[1] Includes costs for housing, fuel and light, food, household expenses, mother's services, and maintenance of household equipment. It is estimated that about 10 percent more is required by women workers who live in furnished rooms and eat their meals in restaurants.

[2] Includes allowances for life insurance and Federal old-age insurance.

[1] New York State Department of Labor. Press release, New York, January 20, 1944.

Wartime Work of Chinese Women[1]

CHINESE women have participated in war emergency services of many kinds. In the midst of hostilities on the Kiangsu-Anhwei border, women workers approached within a few kilometers of the firing line to seek war waifs, and they found 200. When the war spread to the interior of China and numerous wounded soldiers were transferred to Nanchang, the capital of the Province of Kiangsi, the women formed a War Service Corps. Its objectives were to bring the soldiers and the people together, teach games, sports, and war songs, and organize recreation clubs for the soldiers.

In Chekiang, the Chekiang Women's Movement Association, organized for emergency war service when that Province was invaded, has grown to a membership of 10,000.

The girl students of Kwangsi, dressed in khaki uniforms and steel helmets and each carrying two hand grenades, pioneered in women's front-line war work and have assisted the troops of Kwangsi everywhere. In 1939 when the Japanese invaded that Province, the girls went to the front with the troops. They assisted in evacuating women and children, and upon being ordered to withdraw they took spades from some men who were destroying roads to impede the Japanese advance, and thus set an example for the people to follow. They also persuaded evacuees to return to their homes when it was expedient.

In Kwantung, girl students served as the first female gendarmes; 200, in khaki uniforms with ammunition belts, shouldered rifles to guard 100 kilometers of a highly important supply line in a hilly region. Another group of students cooked "congee," helped carry ammunition for soldiers, and cared for the wounded from the front.

The girls are members of the women's production corps of the Kwantung Women's Advisory Committee of the New Life Movement Association. They have been primarily trained to spin, weave, sew, and teach illiterate women to read and write. The only other work they had previously undertaken was harvesting for peasants. But the drill they had undergone and the elementary military knowledge they had acquired stood them in good stead in the emergency.

Medical service.—A survey of 1939 disclosed that there were in China 941 registered women doctors, 3,779 nurses, and 273 pharmacists—a total of 4,993. In the middle of 1941 the number of trained women in China in wartime medical service was 2,164, including 1,384 nurses and 195 fully trained doctors. Of the total, 1,114 were then serving with the Army Medical Service, 457 with the Chinese Red Cross Medical Relief Corps, 393 with the National Health Administration, and 200 in the Administration's hospitals and other organizations.

The livelihood department promotes women's welfare. When fighting neared Hankow, this department aided in evacuating 30,000 women, and then helped them to find new jobs. Since January 1940 it has organized 6 corps for employment in large-scale factories.

Women in reconstruction.—Many new roads have been built to Chunking. Chinese women have had their part in this construction work, and thousands helped to build the 240-mile Kansu-Szechwan Highway.

The Women's Advisory Council of the New Life Movement Association was expanded to nine departments after a meeting of leading Chinese women called by Madame Chiang in May 1938. Among

[1] Data are from China After 5 Years of War (London, Victor Gollancz, Ltd., 1943). (The report was prepared under the auspices of the Chinese Ministry of Information.)

these departments are three that deal, respectively, with training, livelihood, and production.

Seven classes were held, from July 1938 to the spring of 1940, in which 1,000 young girls, mainly "middle school" graduates, received political and military training and were also taught handicrafts and home industries.

The production department maintains a sericulture and a spinning and weaving experimental district, and operates a spinning and weaving mill and a handicraft section. It has introduced modern methods of sericulture in rural Szechwan and taught women spinning, weaving, and making embroideries for foreign markets. In the 3 years between 1938 and 1940, 3,037 technicians and 362 staff workers have been trained. The trained women in turn teach others what they have learned.

The 3 main enterprises of the production department—improvement of sericulture, production of cloth, and promotion of hand-made embroidery—employ the cooperative system and are known as "New Life Cooperatives." So far, 35 cooperatives have been organized. To give directions for improved working methods, the department has established 46 stations. The number of women working in the 3 enterprises is 6,932.

Among the functions of the rural services department is the improvement of the standard of living with the collaboration of the production department. Rural teams of the rural service department have taught 66,913 illiterate women, 23,394 children, and 12,246 men to read and write.

The activities of all women's organizations in China are headed up in the Women's Advisory Council of the New Life Movement Association. Its coordinating department keeps in touch with 351 women's organizations all over China.

India's Women in War Activities[1]

THE women of India are active not only in war industries but also in the Red Cross and several special organizations. Thus, the Women's Auxiliary Corps consists of more than 5,000 women of all creeds, castes, and nationalities. It includes 45 distinctive occupational classes, among them switchboard operators, telephone orderlies, wireless operators, plotters in the observer corps, staff-car drivers, and clerks in military offices.

The Indian Nursing Service recruits both Indian and European women for military hospitals and units connected with the Indian Army. Hundreds of women in this service have been volunteering for overseas work. In September 1941, the Auxiliary Nursing Service was organized to train women as nurses to form a reserve for the regular Military Nursing Service. A few women medical graduates have been recruited for the Indian Medical Service for general duty abroad as well as in India. These women will be commissioned and paid on the same scale as men.

The labor force in factories engaged in war work includes large numbers of women, especially in the textile mills which are mainly centered in Bombay. Women constitute 13 percent of the entire factory labor force.

[1] Data are from Indian Information (Government of India, British Information Services, Washington), October 15, 1943.

Industrial Disputes

Strikes in January 1944

PRELIMINARY estimates of the Bureau of Labor Statistics for January 1944 show 330 strikes, involving 110,000 workers, and 625,000 man-days of idleness. The number of strikes was about the same as in December, but the number of workers involved was less than half, and the number of man-days idle was somewhat lower. Idleness in January was 0.08 percent of the available working time as compared with 0.09 percent in December.

The strike causing the most idleness during January involved about 8,500 textile workers in Fall River, Mass. It began in December and continued through the entire month of January.

The figures given below for comparison exclude strikes lasting less than one working day (or shift) and those involving fewer than 6 workers.

Strikes in January 1944, With Comparative Figures for Earlier Periods

Month	Strikes beginning in month		Man-days idle during month (all strikes)	
	Number	Workers involved	Number	Percent of available working time
January 1944 [1]	330	110,000	625,000	0.08
December 1943 [1]	325	241,000	715,000	.09
January 1943 [1]	195	90,000	450,000	.06
January 1942	156	26,929	330,567	.05
January 1941	240	91,897	663,185	.11
January 1940	128	26,937	246,674	.05
January 1939	203	51,159	513,460	.10

[1] Preliminary figures, subject to revision.

Activities of the United States Conciliation Service, January 1944

THE United States Conciliation Service, during January disposed of 1,931 situations involving 1,176,227 workers (table 1). The services of this agency were requested by the employers, employees, and other interested parties. Of these situations, 168 were strikes and lockouts involving 79,180 workers, 1,084 were threatened strikes and controversies involving 416,805 workers. A total of 348 disputes was certified during the month to the National War Labor Board, and in 77 cases other agencies assumed jurisdiction. The remaining 255 situations included investigations, arbitrations, requests for information, consultations, etc.

The facilities of the Service were used in 28 major industrial fields, such as building trades and transportation, and the manufacture of iron and steel, transportation equipment, textiles, food, etc. (table 2), and were utilized by the employees and employers in 47 States, the District of Columbia, Puerto Rico, and Alaska (table 3).

TABLE 1.—*Situations Disposed of by United States Conciliation Service, January 1944, by Type of Situation*

Type of situation	Number	Workers involved
All types of situations	[1] 1,931	1,170,227
Labor disputes	1,252	895,903
Strikes	163	79,305
Threatened strikes	131	93,194
Lockouts	5	273
Controversies	953	723,011
Other situations	255	22,224
Arbitrations	104	7,402
Technical services	21	11,220
Investigations	25	1,826
Requests to conduct consent elections	2	300
Requests for verification of union membership	3	229
Requests for information	19	72
Consultations	47	198
Special services of Commissioners	21	469
Complaints	13	15
Disputes referred to other agencies during negotiations	424	658,018
To National War Labor Board	348	634,972
To National Labor Relations Board	44	17,611
To other Federal agencies	23	2,148
To nongovernmental agencies	7	3,200
To State agencies	2	987

[1] During the month 159 cases involving 91,787 workers were adjusted subject to hearings-officer or arbitration procedure, with the hearings officer or arbiter to be selected by the National War Labor Board.

TABLE 2.—*Situations Disposed of by United States Conciliation Service, January 1944, by Industries*

Industry	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All industries	1,676	1,154,003	255	22,224	1,931	1,170,227
Agriculture	3	8,118			3	8,118
Building trades	52	18,607	2	28	54	18,635
Chemicals	63	20,977	9	577	72	21,554
Communications	14	43,837	3	7	17	43,844
Electrical equipment	47	105,640	6	11	53	105,651
Food	135	42,059	11	172	146	42,231
Furniture and finished lumber	63	13,437	15	644	78	14,081
Iron and steel	216	316,784	30	3,942	246	320,726
Leather	25	5,670	23	1,459	48	7,129
Lumber	47	5,818	5	107	52	5,925
Machinery	82	60,480	13	2,873	95	63,353
Maritime	17	12,378	2	55	19	12,433
Mining	33	9,391	1	5	34	9,396
Motion pictures	6	2,831			6	2,831
Nonferrous metals	70	96,031	14	512	84	96,543
Paper	15	3,409	2	7	17	3,416
Personal service	63	20,490	7	256	70	20,746
Petroleum	20	3,588	6	2,705	26	6,293
Printing	27	2,549	3	94	30	2,643
Professional	10	1,468	4	7	14	1,475
Rubber	19	14,243	1	6	20	14,249
Stone, clay and glass	48	14,386	7	232	55	14,618
Textile	66	19,691	28	648	94	20,339
Tobacco	8	8,503	1	2	9	8,505
Trade	169	6,732	13	243	182	6,975
Transportation	134	34,633	14	1,627	148	36,260
Transportation equipment	128	229,608	20	5,654	148	235,262
Utilities	17	7,588	3	23	20	7,611
Miscellaneous	79	25,057	12	328	91	25,385

TABLE 3.—*Situations Disposed of by United States Conciliation Service, January 1944, by States*

State	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All States	1,676	1,154,003	255	22,224	1,931	1,176,227
Alabama	22	11,633	2	305	24	11,938
Alaska	1	5			1	5
Arizona	12	7,184	2	105	14	7,289
Arkansas	11	2,119			11	2,119
California	135	70,858	9	38	144	70,896
Colorado	13	4,406			13	4,406
Connecticut	17	6,744	7	516	24	7,260
Delaware	4	4,250	1	2	5	4,252
District of Columbia	10	5,975	5	244	15	6,219
Florida	17	6,519	1	4	18	6,523
Georgia	4	201	3	208	7	409
Idaho	9	3,625			9	3,625
Illinois	173	88,643	14	1,367	187	90,010
Indiana	81	16,044	14	1,777	95	17,821
Iowa	38	7,638	2	39	40	7,677
Kansas	15	1,311	3	72	18	1,383
Kentucky	19	2,125			19	2,125
Louisiana	5	578	2	26	7	604
Maine	4	77	1	1	5	78
Maryland	10	3,634	1	4	11	3,638
Massachusetts	59	26,652	38	1,905	97	28,557
Michigan	122	57,637	23	928	145	58,565
Minnesota	31	7,066	2	10	33	7,076
Mississippi	1	16			1	16
Missouri	78	19,109	3	122	81	19,231
Montana	9	7,099			9	7,099
Nebraska	9	1,170	1	3	10	1,173
Nevada	5	875			5	875
New Hampshire	3	926	1	15	4	941
New Jersey	63	32,577	9	3,818	72	36,395
New Mexico	11	2,575	3	6	14	2,581
New York	139	185,361	14	1,443	153	186,804
North Carolina	22	6,590	2	18	24	6,608
Puerto Rico	24	21,060	2	4	26	21,064
North Dakota	11	212	1	4	12	216
Ohio	142	60,521	29	6,206	171	66,727
Oklahoma	9	1,239	4	121	13	1,360
Oregon	44	2,689	3	85	47	2,774
Pennsylvania	121	355,529	20	1,959	141	357,488
Rhode Island	8	11,160	2	14	10	11,174
South Carolina	5	1,535	7	7	12	1,542
Tennessee	35	11,276	3	6	38	11,282
Texas	18	2,631	1	1	19	2,632
Utah	6	555			6	555
Vermont	2	437			2	437
Virginia	13	1,132	6	241	19	1,373
Washington	40	19,670	6	220	46	19,890
West Virginia	10	15,319	3	353	13	15,672
Wisconsin	35	57,780	5	27	40	57,807
Wyoming	1	36			1	36

Labor Laws

Argentine Legislation on Employment of Minors, 1943[1]

PAID employment of minors of both sexes over 14 years of age up to a maximum of 8 hours per day or 48 hours per week, under certain circumstances, was recently authorized in Argentina.[2] The purpose of the new legislation is to provide a supply of apprentices for the skilled trades and at the same time to prevent other substitution of minors for adults.

Employment of minors over 14 years of age up to 8 hours per day is permitted under the following conditions: (1) That they have completed the compulsory primary education and that they are employed as apprentices (exception may be made for those who have not completed their primary education, provided they continue this education outside of working hours in continuation schools of the National Council of Education); (2) that they are physically able to do the work, as certified by annual physical examination in the National Bureau of Hygiene; (3) that they are not employed on tasks dangerous for health or morals, or on work during the night or on Saturday afternoon or Sunday; (4) that their entrance wage is not less than 30 centavos[3] per hour for the first year and 45 centavos the second year in the Federal capital, or the rate fixed by the authorities for the Provinces and Territories; (5) that they have permission from parents or guardians, or in absence of these, the Children's Bureau; and (6) that they have a police identification card which shall be issued free of charge by the proper authorities. In addition to the above requirements, minors between 14 and 16 years must receive authorization to work from the National Labor Bureau.

Certificates of competency are to be issued by employers to minors who complete their apprenticeship.

Persons under 18 years of age are not to work the 8-hour day and 48-hour week, except in technical tasks where they serve apprenticeship for a trade or vocation. For other tasks their working day is not to exceed 6 hours per day or 36 per week. Vacancies in the adult personnel of establishments are not to be filled with persons under 18 years of age, nor are any changes to be made in the personnel to the disadvantage of adults.

The National Labor Bureau is to supervise the vocational education for minors, utilizing the supervisory machinery at present in use.

Failure to comply with the provisions of the legislation of 1943 on the part of employers is to be punished by a fine of from 50 to 1,000 pesos, national currency, doubled in case of repetition, or an equivalent period of imprisonment.

[1] Data are from Derecho del Trabajo, Buenos Aires, September 1943; Labor Legislation of Argentina, U. S. Bureau of Labor Statistics, Bulletin No. 510 (pp. 48–50).

[2] Decree No. 6289 of August 24, 1943, amended by decrees Nos. 7646 and 7662 of September 13, 1943. This 1943 legislation amends law No. 11317 of September 30, 1924, concerning the employment of women and minors.

[3] Average exchange rate of peso (100 centavos) in 1943=26.8 cents.

Employment Contract Law of Surinam (Dutch Guiana), 1943[1]

EMPLOYMENT agreements entered into by all persons in Surinam except seamen and Government employees are regulated by a new law which became effective November 1, 1943, after final passage on March 4, 1943. The nature of the employment contract is defined and wages and working conditions are stipulated. The law specifies the causes for which the contract can be terminated by employer and employee with and without advance notice.

Provisions of the Law

The employment contract is defined as one "whereby one party, the employee, agrees to perform work during a specified time in the service of the other party, the employer, in return for pay."

Wages and working conditions.—Money wages are to be computed on the basis of a 10-hour day, a 6-day week, a 25-day month, and a year of 300 days.

Wages must be paid "for a reasonable period" for absences caused by bona fide illness or accident lasting beyond 2 days. Payments must begin on the third day and are to be diminished by the amount of any compensation received by the worker from compulsory sickness or other disability funds.

Deductions from wages are allowed only for debts owed to the employer or fines imposed by him, or for contributions to funds required by the law of the district where the work is performed. If the employee's money wages do not exceed 4 florins per day, not more than two-fifths of this may be attached for debt; above this wage (and in cases of nonsupport of dependents) there is no limit on wage attachments. Except upon termination of service, total deductions may not amount to more than one-fourth of the money wages earned since the last payment of wages.

Employers are forbidden to charge the employee interest in any form on loans or advances, or to charge him for the use or maintenance of the employer's materials or tools, or to sell him goods at prices higher than those prevailing locally.

The maximum workday is set by the law at not to exceed 10 out of 24 consecutive hours; in computing the number of hours worked, only rest periods of one-half hour or more are to be deducted from the total time worked. The Governor is authorized to reduce this maximum day for specific companies, industries, or groups of workers. He may also exempt certain companies or industries from the hours provisions.

Housing accommodations furnished by an employer must meet reasonable requirements.

Termination of contract.—Notice of intention to terminate the employment must be given at least 1 month in advance; in the case of employees with service of 1, 2, or 3 years, the period of advance notice is increased to 2, 3, or 4 months, respectively. On termination of service, the employer is obliged to give the employee, upon request, a signed and dated testimonial.

[1] Data are from report of Joseph J. Magurn, United States vice consul at Paramaribo, November 30, 1943.

A contract may be terminated without notice by employer or employee, but this is unlawful without consent of the other party unless compensation is paid or termination is for reasons recognized by the law as valid, as follows: (*a*) For the employer—furnishing of false information by the employee at time of hiring; inability of employee to perform work required of him; drunkenness or other misconduct on part of the employee; theft, embezzlement, fraud or other misdemeanor; maltreatment, abuse, or threats directed at the employer or fellow employees; influencing of the employer or fellow employees to act in contravention of the law or of good morals; damaging or endangering property of the employer; employee's exposing himself or others to serious danger; disclosure of confidential details of the employer's household or business affairs; refusal to comply with reasonable requests made by the employer or his representatives; and serious disregard of other obligations imposed upon him by the contract; and (*b*) for the employee—maltreatment, abuse, or unlawful threat; failure to pay wages at the time stipulated; failure to provide proper food and shelter included as part of the compensation; failure to provide sufficient work when the pay is based on output; serious failure to comply with any other obligations imposed upon him by the contract; and insistence that the employee, against his will and without reason connected with the nature of the work, render services in the establishment of another employer. The employee may leave his work without notice if continuation would involve serious danger to his life, health, morals, or reputation, or if, because of sickness or other causes beyond his control, he is not able to perform the work required.

Miscellaneous provisions.—Regulations issued by employers in the Dutch language are binding for the employee only with his written consent. The law also stipulates that the employer must provide the employee with a complete text of the regulations, post for public inspection a signed copy at the office of the local District Commissioner and post a legible copy in a place easily accessible to the employee. An employee may not agree in advance to accept the terms of regulations to be established in the future or to accept some future amendment to existing regulations. Regulations must always be published in enterprises which employ more than 20 persons, unless a separate written contract is concluded with each employee.

Effect of the Law

The law was enacted as the result of an investigation by a committee appointed by the Governor. It was declared by him to be applicable to 22 companies, including mining companies, transportation companies, public utilities, sawmills, and various other commercial enterprises. In several companies conditions were already in advance of the new law. The large bauxite company whose labor difficulties led to the appointment of the investigating committee has been exempted from the hours provisions, but the law will require it to abandon its practice of dismissals almost entirely without notice.

Wage and Hour Statistics

Hourly Earnings in Aircraft-Engine Plants, August 1943 [1]

Summary

STRAIGHT-TIME average hourly earnings of factory workers in selected key occupations in the aircraft-engine industry amounted to $1.158 in August 1943, ranging from 82.5 cents per hour for janitresses to $1.498 per hour for male tool and die makers, class A. Earnings of office workers averaged 72.3 cents per hour, with a range from 57.5 cents for office boys to $1.160 for male bookkeepers.

Among the various plants a wide range of occupational wage rates was found, similar to that revealed by the Bureau of Labor Statistics' 1942 study.[2] These differences appear to result from a variety of factors, such as differences in method of wage payment and in local labor-market conditions. Regional variations were not of fundamental importance, since the industry is located largely in the northeastern part of the United States. Nearly all of these companies operate under bargaining agreements with trade-unions.

The large increase in the proportion of women employed in factory occupations is perhaps the most notable change in the working force which has taken place in the industry during the past year or two. In August 1943 women comprised 28 percent of the working force in the industry as a whole, including clerical workers, and about 20 percent of the total number of factory employees.

Characteristics of the Industry

The aircraft-engine industry has expanded sufficiently in recent years to be considered as containing all the elements of mature development. It consists of relatively few establishments, many of which are very large. Practically all of the plants are east of the Mississippi and north of the Ohio and Potomac Rivers. They are of two general types—those originally constructed for aircraft-engine manufacture, and those converted from the manufacture of automotive engines or equipment. Employment is divided almost equally between these two types of plant.

In common with other branches of the aircraft industry, the manufacturers of aircraft engines were faced with a demand for unprecedented expansion in the spring of 1940 at the start of the rearmament program. It became evident immediately that the industry could not hope to meet the production quotas placed upon it without modifying

[1] Prepared in the Bureau's Division of Wage Analysis by T. W. Reedy under the supervision of Victor S Bell.

[2] Earnings in Aircraft-Engine Plants, May 1942, in Monthly Labor Review, December 1942.

considerably its existing methods of slow and painstaking construction of aircraft engines by a limited number of all-round mechanics. Without lessening the need for quality, the demand for quantity made essential a tremendous speeding up of the manufacturing processes.

The industry might have continued to use its old methods had the supply of skilled workers in the labor market been unlimited. However, when journeyman machinists were no longer available and the employment and training of large numbers of less-skilled workers became necessary, revisions in the manufacturing processes to shorten the learning period of these new workers assumed prime importance. Fortunately, the pattern for development of mass-production methods already existed in the automotive plants. It was natural that the industry should turn to these plants for aid both in the development of mass-production techniques and in retooling for the production of the intricate and powerful motors needed for military aircraft. The extent to which the industry as a whole adapted itself to mass production is exemplified by its capacity to absorb large numbers of unskilled women, many of whom never worked in a factory before. Women were found in a majority of the selected occupations studied during the course of this survey.

Of the 27 plants included in this survey, all but 2 had union agreements. In 19, the agreements were with unions affiliated with the C. I. O., and in 3 with unions affiliated with the A. F. of L. Of the 3 remaining union plants, 1 had agreements with both an A. F. of L. and a C. I. O. union; another with both an A. F. of L. and an independent union; and the third had an agreement only with an independent union.

Scope of the Survey

The occupational wage-rate information and related data which follow were obtained from pay-roll and other pertinent records of the plants studied by field representatives of the Bureau of Labor Statistics. This material was collected in the course of a general survey of occupational wage rates in this and other industries. In most cases the data relate to a pay-roll period during or about August 1943.

No attempt was made in the present survey to obtain data for all occupations found in the aircraft-engine industry. Instead, data were collected only for a limited number of carefully selected occupations which are believed to be generally representative of skill and earnings levels in the industry. These typical occupations, which are found in practically all plants in the industry and which account for nearly half of the workers, are suitable for reflecting general industry wage levels and trends in occupational wage rates.

The rates shown for classifications within an occupation represent an attempt in each case to determine the nature of the workers' duties in terms of the degree and types of skill required and the amount of responsibility attached to their jobs. As far as possible, the criteria followed in setting up these classes were applied uniformly. Turret-lathe operators, for example, were reported as class B operators if their current work conformed to the general criteria established for that classification, regardless of their pay-roll designation or level of pay in a particular plant.

The earnings data presented in this report for selected plant occupations are straight-time average hourly earnings exclusive of premium

overtime and shift-differential earnings. Similar data for selected office occupations were also obtained from 18 of the 27 plants surveyed.

Wage Trends Since January 1941

Average hourly earnings in the aircraft-engine industry have increased substantially during the war period. Gross average hourly earnings, which include premium payments for overtime and for work on late shifts, increased from 89.2 cents in January 1941 to $1.256 in August 1943, a total advance of 40.8 percent. These figures are influenced by a number of factors, such as differences in the composition of the labor force in the two periods and increases in the amount of overtime work and in the proportion of workers on second and third shifts. Eliminating the influence of overtime payments from both the January 1941 and the August 1943 averages, it is estimated that average hourly earnings over this period increased by 41.3 percent. It should be realized, however, that this figure is still influenced by changes in the composition of the labor force and in the proportion of workers on second and third shifts over this period. Most of the increase in average hourly earnings took place between January 1941 and January 1942. It should be pointed out that the above earnings are based on data for all workers in the industry and, for that reason, should not be confused with the wage data presented later in this report, which are based on data for selected occupations only.

Average Hourly Earnings

METHOD OF WAGE PAYMENT

In the aircraft-engine industry, as in other industries, the "take-home" earnings of workers are influenced by a number of factors other than the hourly rates of experienced workers; for example, entrance rates of pay, the number of hours worked, premium pay for overtime hours and late-shift work, and prevalence of incentive-wage payment. Considerable variation in the influence of these elements is found among the various aircraft-engine plants.

There is little uniformity to be found in aircraft-engine plants in entrance rates for inexperienced workers or in provisions for increases from those rates. Entrance rates in 20 plants reporting such information varied from 55 to 99 cents per hour. Six plants reported rates of 60 cents for both sexes, while three plants reported a sex differential of 6 cents per hour, the entrance rates being 88 cents per hour for men, and 82 cents per hour for women (table 1). A total of eight plants reported higher entrance rates for men than for women.

The most usual method of automatic advancement found was an increase of 5 cents per hour every 4 weeks, or every 30 days, until the minimum job rate was reached. The minimum job rate was usually paid after 13 weeks of service; thereafter, promotion was based upon a decision as to individual merit. The most liberal provision for automatic increase was one of 10 cents per hour after 4 weeks of service. One plant increased the rate 2.5 cents per hour each month until the top job rate was reached. Only one plant lacked provisions for automatic advancement from the entrance rate.

TABLE 1.—*Minimum Entrance Rates for Inexperienced Workers in Aircraft-Engine Plants, and Provisions for Automatic Increase, August 1943*

Number of plants	Entrance rates		Provisions for automatic increase
	Men	Women	
1 plant	$0.99	$0.99	5 cents per hour after 30 and 90 days.
1 plant	.90	.90	5 cents per hour after third and fifth weeks, then minimum job rate.
3 plants	.88	.82	5 cents per hour every 4 pay periods, then minimum job rate.
1 plant	.85	.85	5 cents per hour every 2 weeks to minimum.
1 plant	.85	.80	10 cents per hour after 4 weeks.
1 plant	.85	.65	Interim code rate after 2 weeks, middle of code rate 30 days.
1 plant	.79	.75	10 cents per hour after 4 weeks.
1 plant	.75	(1)	2.5 cents per hour each month to top rate.
1 plant	.70	.70	Merit increases only.
1 plant	.70	.65	5 cents per hour after 30 and 90 days.
1 plant	.65	.60	5 cents per hour per month to job rate.
5 plants	.60	.60	5 cents per hour every month for 3 months, then minimum job rate.
1 plant	.60	.60	75 cents at end of 4 months.
1 plant	.55	.55	5 cents per hour every 30 days to minimum job rate.
5 plants	(1)	(1)	5 cents per hour every 4 weeks or 30 days.
2 plants	(1)	(1)	Upgraded every 30 days to job minimum.

[1] Data not available.

Wage differentials for work on the night shifts were reported in 26 of the 27 plants (table 2). Considerable variation was found in the shift differentials paid. The rates of second- and third-shift workers exceeded those of day workers by 5 percent in 8 plants, by 5 cents in 5 plants, and by 10 percent in 3 plants. In three plants a 7.5-cent differential was paid for both late shifts, with 8 hours' pay for 6½ hours' work on the third shift. Five additional plants operating 3 shifts paid other shift differentials. Two plants, operating only 2 shifts, paid second-shift workers a wage differential of 10 percent. At the time of the survey, 34 percent of the employees in the industry worked on the second shift, and 19 percent on the third shift.

TABLE 2.—*Shift Differentials Paid to Second- and Third-Shift Employees in 27 Aircraft-Engine Plants, August 1943*

Number of plants	Differentials paid for—	
	Second (evening) shift	Third (night) shift
8 plants	5 percent	5 percent.
5 plants	5 cents per hour	5 cents per hour.
3 plants	10 percent	10 percent.
3 plants	7.5 cents per hour	7.5 cents plus 8 hours' pay for 6.5 hours' work.
2 plants	10 percent	No third shift.
1 plant	7.5 percent	12.5 percent.
1 plant	10 percent or 10 cents per hour, whichever is higher.	20 percent.
1 plant	8 hours' pay for 7 hours 18 minutes' work	8 hours' pay for 7 hours 12 minutes' work.
1 plant	8 hours' pay for 7.25 hours' work	8 hours' pay for 7.25 hours' work.
1 plant	½ hour's additional pay regardless of time worked.	½ hour's additional pay regardless of time worked.
1 plant	Not reported	Not reported.

Nearly one-fourth of the workers covered in the survey worked under various systems of incentive wages. These workers were employed in 8 of the 27 plants studied. The incentive systems varied from simple piece-work payments for a few employees to a departmental bonus plan based upon group or individual production in excess

of a predetermined standard. A cost-of-living bonus was paid in one plant. In all other plants, however, all production employees were paid a regular hourly rate.

AVERAGE EARNINGS BY OCCUPATION

Average straight-time hourly earnings for 58 production and maintenance occupations combined amounted to $1.158 in August 1943 (table 3). The average for male employees in these occupations was $1.189, and that for women (in those occupations in which they were employed) was $1.036. These averages are somewhat above the average straight-time hourly earnings based upon all occupations, owing to the relatively high wage rates of many of the occupations represented and to the omission of certain low-wage occupations from the selected list.

TABLE 3.—*Average Straight-Time Hourly Earnings of Workers in Aircraft-Engine Plants, by Occupation and Sex, August 1943*

Occupation and sex	Number of plants	Percent of total selected employees	Average hourly earnings	Range of individual plant average hourly earnings	
				Low	High
All selected occupations	27	[1] 100.0	$1.158		
Males		80.2	1.189		
Females		19.8	1.036		
Males					
Assemblers, bench, class A	7	.8	1.296	$1.050	$1.362
Assemblers, bench, class B	15	1.2	1.131	.920	1.458
Assemblers, bench, class C	14	1.5	1.127	.804	1.161
Assemblers, floor, class A	11	1.1	1.299	1.119	1.850
Assemblers, floor, class B	18	1.9	1.150	.927	1.593
Assemblers, floor, class C	15	3.1	1.130	.773	1.202
Burrers, class B	18	2.4	1.106	.835	1.263
Burrers, class C	15	1.2	1.094	.731	1.296
Carpenters, maintenance, class A	26	.4	1.160	1.022	1.370
Carpenters, maintenance, class B	14	.1	1.067	.914	1.192
Drill-press operators, single spindle, class A	4	.2	1.274	1.070	1.313
Drill-press operators, single spindle, class B	15	1.2	1.155	.907	1.228
Drill-press operators, single spindle, class C	20	2.2	1.123	.798	1.175
Drill-press operators, multiple spindle, class B	15	1.1	1.125	.865	1.280
Drill-press operators, multiple spindle, class C	14	.6	1.128	.783	1.229
Electricians, maintenance, class A	23	1.1	1.306	1.008	1.431
Electricians, maintenance, class B	18	.3	1.118	.917	1.452
Engine-lathe operators, class A	16	1.0	1.348	1.100	1.809
Engine-lathe operators, class B	22	1.1	1.187	.953	1.490
Engine-lathe operators, class C	20	1.2	1.122	.862	1.242
Grinding-machine operators, class A	17	3.0	1.303	1.092	1.674
Grinding-machine operators, class B	25	3.9	1.205	.864	1.485
Grinding-machine operators, class C	24	2.9	1.141	.839	1.251
Guards	20	2.7	1.025	.801	1.412
Inspectors, class A	23	3.0	1.342	1.000	1.715
Inspectors, class B	27	3.7	1.216	.923	1.472
Inspectors, class C	24	3.7	1.089	.779	1.250
Janitors	24	4.3	.875	.711	.974
Machinists, maintenance, class A	19	1.4	1.374	1.129	1.650
Machinists, maintenance, class B	15	.3	1.201	.928	1.401
Milling-machine operators, class A	17	1.2	1.269	1.070	1.715
Milling-machine operators, class B	23	1.5	1.148	.932	1.472
Milling-machine operators, class C	21	1.7	1.147	.838	1.304
Millwrights, class A	21	1.3	1.263	1.021	1.370
Millwrights, class B	11	.5	1.212	.950	1.296
Polishers and buffers, class A	9	2.0	1.316	1.070	1.381
Polishers and buffers, class B	21	.8	1.173	.908	1.593
Polishers and buffers, class C	14	1.0	1.158	.770	1.242
Screw-machine operators, automatic, class A	6	.3	1.244	1.170	1.290
Screw-machine operators, automatic, class B	16	.7	1.198	.866	1.485
Screw-machine operators, automatic, class C	7	.1	1.127	1.046	1.238
Screw-machine operators, hand, class A	7	[2]	1.259	1.230	1.280
Screw-machine operators, hand, class B	10	.7	1.188	1.030	1.300

See footnotes at end of table.

TABLE 3.—*Average Straight-Time Hourly Earnings of Workers in Aircraft-Engine Plants, by Occupation and Sex, August 1943*—Continued

Occupation and sex	Number of plants	Percent of total selected employees	Average hourly earnings	Range of individual plant average hourly earnings	
				Low	High
Males—Continued					
Screw-machine operators, hand, class C	7	0.2	$1.136	$0.930	$1.304
Stock clerks	21	.9	.991	.771	1.102
Testers, engines	14	1.2	1.217	.906	1.326
Tool and die makers, class A	22	2.7	1.498	1.300	1.709
Tool and die makers, class B	13	.7	1.396	1.115	1.612
Truck drivers	19	.6	1.057	.817	1.159
Truckers, hand	19	.9	.930	.735	1.134
Truckers, power	20	.9	.976	.802	1.140
Turret-lathe operators, automatic, class A	4	.1	1.281	1.090	1.395
Turret-lathe operators, automatic, class B	6	.2	1.053	.962	1.210
Turret-lathe operators, semi-automatic, class A	9	1.0	1.291	1.090	1.365
Turret-lathe operators, semi-automatic, class B	17	1.1	1.177	.974	1.460
Turret-lathe operators, semi-automatic, class C	7	.8	1.188	.868	1.502
Welders, hand, class A	23	1.0	1.299	1.140	1.420
Welders, hand, class B	14	.2	1.227	.987	1.405
Working foremen, processing departments	11	2.8	1.514	1.060	1.701
Females					
Assemblers, bench, class B	7	.3	1.074	.931	1.200
Assemblers, bench, class C	16	1.0	1.048	.660	1.161
Assemblers, floor, class B	7	.5	1.151	.816	1.320
Assemblers, floor, class C	11	.8	1.073	.907	1.222
Burrers, class B	9	1.6	1.025	.814	1.154
Burrers, class C	18	1.3	.984	.700	1.226
Drill-press operators, single spindle, class B	8	.4	1.051	.902	1.193
Drill-press operators, single spindle, class C	21	1.2	1.058	.722	1.175
Drill-press operators, multiple spindle, class B	7	.2	1.079	.931	1.200
Drill-press operators, multiple spindle, class C	11	.3	1.024	.836	1.229
Engine-lathe operators, class B	10	.1	1.104	.825	1.460
Engine-lathe operators, class C	16	.6	1.063	.994	1.202
Grinding-machine operators, class A	3	.1	1.358	1.029	1.374
Grinding-machine operators, class B	17	.7	1.060	.841	1.405
Grinding-machine operators, class C	17	1.6	1.060	.845	1.175
Guards	7	(2)	.984	.772	1.095
Inspectors, class A	4	.2	1.277	1.200	1.305
Inspectors, class B	16	1.5	1.094	.966	1.254
Inspectors, class C	19	3.6	.958	.700	1.139
Janitors	18	.6	.825	.432	.900
Milling-machine operators, class B	9	.3	1.071	.907	1.200
Milling-machine operators, class C	21	.8	1.107	.823	1.302
Polishers and buffers, class B	4	.1	1.114	.986	1.139
Polishers and buffers, class C	10	.8	1.028	.639	1.302
Screw-machine operators, automatic, class B	7	.1	1.140	1.120	1.225
Screw-machine operators, automatic, class C	5	.1	1.058	1.003	1.229
Stock clerks	13	.2	.834	.700	1.004
Testers, engines	4	.1	.831	.758	1.137
Truckers, power	6	.1	.917	.712	.980
Turret-lathe operators, automatic, class B	3	(2)	.967	.772	1.200
Turret-lathe operators, semi-automatic, class B	12	.2	1.042	.871	1.139
Working forewomen, processing departments	5	(2)	.881	.850	1.000

[1] Including all occupations surveyed. Four occupations are included in this total which are not listed separately below.
[2] Less than a tenth of 1 percent.

Aside from working foremen in processing departments, who received $1.514 per hour, the highest average hourly earnings among the selected occupations, $1.498 per hour, were received by class A tool and die makers, and the lowest rate, 82.5 cents per hour, by janitresses. Only 4 of the occupations listed for male employees, namely, janitors, stock clerks, hand truckers, and power truckers, averaged less than $1.00 per hour. Women received less than $1.00 per hour in 9 occupations, of which class C burrers, class C inspectors, engine testers, and class B automatic turret-lathe operators were in processing departments. The greatest concentration of employees

was found in the occupations of inspector and of grinding-machine operator. These two occupations in their various grades accounted for 28 percent of the employees surveyed.

Wide variations in average hourly earnings among plants are found in most occupations. For example, there was a spread of 71.5 cents between the lowest and the highest plant averages shown for class A male inspectors. Such differences were due in part to variations in method of wage payment, as incentive workers typically received higher wages than workers paid by the hour.

Women were employed in sufficient numbers to be reported in 32 of the 58 occupations listed. (Some women were found in 50 of the 62 occupations for which data were obtained during the course of this survey.) In practically every comparable occupation, women earned less than men. The unfavorable position of women, with respect to wages, is attributable in part to the recent employment of large numbers of women, many of whom were still at the minimum wage rate for their occupation at the time of this study. The highest average rate found among women employees was $1.358, paid to class A grinding-machine operators.

Examination of individual plant averages for all selected occupations reveals that there was no marked difference in straight-time average hourly earnings which appeared to reflect regional variation in wage levels. Average hourly earnings for plants formerly producing automobile parts or engines were approximately the same as in many of the old-line aircraft-engine plants. In this respect the wage structure in the aircraft-engine industry differs from that found in the airframe industry, in which plants converted from automotive production or established by companies engaged in such production pay wages generally above the industry average. With the exception of a few very small plants, in which wages were relatively low, there did not appear to be any significant variation in wage level by size of establishment. Nearly all plants, as has been noted, operated under bargaining agreements with unions.

COMPARISON WITH 1942 SURVEY

Comparison of average hourly earnings in aircraft-engine plants can be made only in the case of 23 occupations covered by both of the Bureau surveys of August 1943 and May 1942. The refinement of labor grades within occupations was not available in the earlier survey, and hence certain combinations have been necessary in order that comparable occupational groupings might be obtained.

In comparing the wage rates for the occupations listed in table 4, two facts should be kept in mind—the great increase in the number of women employed, and the change in proportion of workers at the various skill levels within each occupation.

The recent extensive employment of women in the industry tends to lower the occupational averages for all workers in the occupations in which women are found, and to cause understatement to some extent of the actual increase in earnings between the two periods. At the time of the 1942 survey, the number of women found was too small to be reported separately in any occupation. In 1943, no women employees were reported in 5 of the occupations shown in table 4—tool and die makers, and the maintenance occupations of

carpenters, electricians, machinists, and millwrights. In the 18 occupations in which women were employed, industry-wide average hourly earnings were somewhat below the averages shown for male employees only. These variations were generally of minor importance, however, the greatest difference being 6.7 cents per hour for inspectors.

TABLE 4.—*Average Hourly Earnings in Selected Occupations, May 1942 and August 1943*

Occupation	Average hourly earnings		
	August 1943		May 1942
	All employees	Male employees only	All employees
Assemblers, bench	$1.140	$1.168	$1.011
Burrers	1.060	1.102	1.045
Carpenters, maintenance	1.141	1.141	1.020
Drill-press operators	1.121	1.145	1.000
Electricians, maintenance	1.269	1.269	1.117
Engine-lathe operators	1.187	1.210	1.057
Grinding-machine operators	1.188	1.215	1.111
Guards	1.024	1.025	.932
Inspectors	1.141	1.208	1.004
Janitors	.869	.875	.803
Machinists, maintenance	1.344	1.344	1.095
Milling-machine operators	1.165	1.181	1.110
Millwrights	1.249	1.249	1.089
Polishers and buffers	1.205	1.244	1.192
Screw-machine operators, automatic	1.194	1.203	1.061
Screw-machine operators, hand	1.180	1.182	1.122
Stock clerks	.962	.991	.907
Testers, engines	1.185	1.217	.962
Tool and die makers	1.478	1.478	1.179
Truckers, hand	.929	.930	.825
Truckers, power	.971	.976	.903
Turret-lathe operators	1.190	1.211	1.110
Working foremen, processing departments	1.507	1.514	1.335

Tool and die makers showed the largest increase, 25 percent, between May 1942 and August 1943. In the two occupations having the largest number of employees, grinding-machine operators and inspectors, the approximate increases were 7 and 14 percent, respectively. The smallest increase, 1.1 percent, occurred in the case of polishers and buffers.

AVERAGE HOURLY EARNINGS IN CLERICAL OCCUPATIONS

Hourly earnings data for 21 selected office occupations were collected from 18 aircraft-engine plants. Average hourly earnings for these clerical occupations, and the low and high plant averages, are presented in table 5. The selected occupations are those generally occurring in the lower wage brackets and are broadly comparable to the less highly skilled factory occupations. Professional, executive, and administrative occupations are omitted.

Women predominated in all occupations studied except those of accountant and bookkeeper, which are generally considered to be "jobs with a future" and hence are attractive to men seeking employment in white-collar occupations.

Average hourly earnings of office workers were on the average 43.5 cents below those of factory workers, amounting to only 72.3 cents for the selected occupations studied. Men, accounting for roughly

one-fifth of the employees, averaged 81.8 cents per hour, while women averaged 70.3 cents. The highest average, $1.160, was paid to male bookkeepers, while the lowest, 57.5 cents, was paid to office boys. Rates for women ranged from 59.8 cents per hour for office girls to 90.5 cents per hour for bookkeepers. The largest single classification among women employees, that of clerk-typists, paid an average of 64.0 cents per hour.

TABLE 5.—*Average Hourly Earnings of Office Employees in Aircraft-Engine Plants, by Occupation and Sex, August 1943*

Occupation and sex	Number of plants	Percent of total selected employees	Average hourly earnings	Range of individual plant average hourly earnings	
				Low	High
All selected occupations	[1] 18	100.0	$0.723		
Males		17.1	.818		
Females		82.9	.703		
Females					
Accounting clerks	15	5.5	.790	$0.674	$0.942
Billing-machine operators	10	.7	.759	.687	.878
Bookkeepers	5	.2	.905	.834	1.101
Bookkeeping-machine operators, class A	6	.5	.806	.676	1.129
Bookkeeping-machine operators, class B	11	.6	.765	.481	1.028
Bookkeeping-machine operators, class C	9	.8	.765	.726	.823
Calculating-machine operators, class A	13	1.9	.862	.679	1.136
Calculating-machine operators, class B	17	5.3	.712	.474	.970
File clerks, class A	8	1.0	.736	.609	1.165
File clerks, class B	13	7.3	.628	.505	.835
Office girls	15	1.3	.598	.460	.854
Order clerks	5	.8	.711	.555	.779
Payroll clerks	10	6.5	.710	.642	.898
Receptionists	6	.4	.688	.596	.711
Stenographers, class A	12	5.2	.812	.711	1.105
Stenographers, class B, and typists	18	14.1	.702	.505	.859
Switchboard operators	13	1.3	.715	.629	.834
Typists, clerk	16	20.7	.640	.468	.851
Typists, copy, class A	8	1.6	.759	.651	.799
Typists, copy, class B	11	4.3	.667	.560	.705
Transcribing-machine operators	4	2.9	.835	.829	1.093
Males					
Accounting clerks	17	15.2	.809	.667	1.248
Bookkeepers	6	.6	1.160	1.101	1.387
Office boys	13	.9	.575	.475	.733

[1] Nine plants did not report office occupations.

Wages in the Mining and Milling of Fluorspar, September 1943[1]

Summary

STRAIGHT-TIME average hourly earnings for workers in selected occupations in fluorspar mines and mills ranged, in September 1943, from 54.8 cents for rock breakers to 96.3 cents for working foremen. Nearly one-half of the workers were in occupations with earnings of less than 70 cents an hour, and all but one-eighth were in occupations averaging 85 cents or less.

Characteristics of the Industry

Fluorspar is a brittle, nonmetallic mineral composed chiefly of calcium fluoride. Although fluorspar is used to some extent in connection with a number of industrial processes in this country, its principal uses are in the production of steel and of hydrofluoric acid. In 1943, according to preliminary data published by the U. S. Bureau of Mines, 60 percent of the fluorspar consumed in the United States was accounted for by the steel industry, where it is used as a flux in open-hearth and electric furnaces. Thirty percent of the total consumption went into the production of hydrofluoric acid, which is essential to the manufacture of two raw materials indispensable in the production of aluminum—synthetic cryolyte and aluminum fluoride. Thus, most of the production of fluorspar is essential to the war economy.

Fluorspar is mined in Illinois, Kentucky, Arizona, Colorado, Nevada, New Mexico, and Utah. Up to the present time, the chief source of domestic supply has been the Illinois-Kentucky fluorspar area, commonly known as the Rosiclare field, which consists of two counties in southern Illinois and three counties in northwestern Kentucky. Mines in this area contributed 86 percent of the total domestic production in 1941 and somewhat more than 80 percent in 1942. In 1943, as a result of the increased production from other States, this percentage dropped to about 76.

In terms of numbers of workers employed, the fluorspar industry is one of the smaller nonmetallic mineral industries. In 1939 the total number of wage earners employed was slightly less than 1,600 for the peak month of the year. Employment had more than doubled by the end of 1943. Nearly three-fourths of the roughly estimated 4,000 wage earners in the industry in December 1943 were employed in mines and mills in Illinois and Kentucky.

The demand for fluorspar since the beginning of the war has been stimulated greatly by the expanded operations of the steel and aluminum industries. In order to insure adequate production to meet this unprecedented demand, the Federal Government has taken steps to increase the output of existing operations and to encourage the development of new sources of supply. Extensive explorations for the purpose of locating new ore deposits have been carried on by the U. S.

[1] Prepared in the Bureau's Division of Wage Analysis by Edith M. Olsen under the direction of Victor S. Baril.

Bureau of Mines and the U. S. Geological Survey. On July 1, 1943, the Office of Price Administration announced general increases in maximum prices of approximately $5.00 a ton on all grades of fluorspar. Of this increase, approximately $3.50 was designed to absorb the higher labor costs resulting from wage increases granted by the National War Labor Board. The remaining $1.50 was granted to stimulate production and development of new fields.[2]

THE LABOR FORCE

The total number of employees in the mining and milling establishments studied ranged from 9 to 600. Only 6 establishments, 5 of which were in the Illinois-Kentucky district, employed over 100 workers at the time of the survey. Excluding office personnel, male workers constituted the entire labor force employed in the fluorspar mines surveyed. Only one mill reported the employment of women workers. The few women were engaged as rock pickers and were paid the same hourly rates as male workers in this occupation.

Of 25 companies studied in the Illinois-Kentucky area, 5 were operating under agreements with labor unions affiliated with the United Mine Workers of America. The mines and mills of these companies employed over one-third of all the workers for whom occupational wage data were obtained. In the western region, the workers in one small operation were organized by a union affiliated with the American Federation of Labor.

Scope and Method of Survey

The earnings data presented in this study of the fluorspar industry were obtained during a field study conducted by the Bureau of Labor Statistics in the fall of 1943. Individual establishments were visited by trained field representatives of the Bureau, who transcribed the information directly from pay-roll and other pertinent plant records. The detailed occupational wage data, which relate to typical pay-roll periods in September 1943, were limited to selected key occupations. These occupations included about half of the wage earners employed in the plants studied. Average hourly earnings, excluding premium payments for overtime and late-shift work, were collected for all workers in these occupations. In order to insure uniformity in the classification of workers in the various establishments, standard occupational definitions were used.

The data obtained for the Illinois-Kentucky fluorspar area relate to 27 mines and 25 mills. These constitute essentially all mining and milling operations employing 9 or more wage earners in that area. Although the Bureau's representatives actually visited only 23 mines and 20 mills operated by 25 separate companies, the data for 4 small mines and 5 small mills were assigned double weight in order to represent similar operations that were not visited. In the western States, the Bureau studied a 50-percent sample of the operations with 9 or more workers. In the selection of this sample, which included 12 mines and 9 mills operated by 14 separate companies, consideration was given to size of operation, location, and corporate affiliation. In combining the data for the Western States with those

[2] See Office of Price Administration release No. 2758, July 1, 1943.

for the Illinois-Kentucky area, it was, of course, necessary to assign double weight to the former. Thus weighted, the average hourly earnings shown for workers in selected occupations in mines and mills represent 2,038 workers. Mines and mills in Illinois and Kentucky employed 1,348 of these workers, and operations in the western States employed 690.

Wage Stabilization

Soon after the beginning of the war production program, fluorspar producers were faced with a drastic manpower shortage resulting from rapid expansion of the industry and from the loss of skilled workers to higher-paying jobs in war plants. The labor-supply problem was particularly critical in the Illinois-Kentucky district, where wage rates were relatively low, and where a number of strikes and slowdowns in the early part of 1943 threatened to curtail production seriously. Urged by the War Production Board and other Government agencies to assist in the alleviation of this condition, the National War Labor Board undertook to establish a wage-stabilization program for the fluorspar industry in this area. On July 2, 1943, the National War Labor Board ordered the adoption of a new wage schedule by all operators in the Illinois-Kentucky district employing 10 or more wage earners. The Board's directive order provided for a new wage-classification schedule, rather than a straight general increase in existing rates of pay. This procedure was recommended in order to eliminate certain prevailing inequalities among workers in occupations requiring comparable skills and responsibilities. In order to maintain the customary wage differential between Illinois and Kentucky, however, the rates established for mines in Kentucky were set 10 cents per hour lower for each occupation than the rates set for the Illinois mines. In both States, underground workers were to be paid hourly rates 13 cents higher for work of comparable skills and responsibilities than surface workers employed either at the mines or in the mills.[3]

Average Hourly Earnings

WAGE-PAYMENT PRACTICES

Incentive methods of wage payment are seldom used in the fluorspar industry. All of the workers in the Illinois-Kentucky district and all but a few in the Western States were paid on a time basis. In the Western States, a few miners and muckers were paid a bonus for output in excess of an established production quota.

The length of the normal workday in most of the establishments surveyed was 8 hours. All companies compensated their workers at the rate of time and a half for work above 40 hours a week. In addition, 6 companies also paid time and a half for work beyond 8 hours a day, and 20 companies also paid this rate for holiday work.

The majority of the establishments included in the survey reported the operation of more than one shift. However, only about 25 percent of the workers were employed on the second shift and less than 4 percent on the third shift. None of the establishments studied

[3] See National War Labor Board release No. B-771, July 2, 1943.

reported the payment of premiums to workers on late shifts. Approximately half of the companies reported periodic shift rotation by the workers.

Wage differentials for workers in particularly hazardous occupations were paid by 4 of the companies in the Western States. These differentials applied, in each case, to shaft sinking and shaft-repair work. As has been noted earlier, the wage scale established for mines in the Illinois-Kentucky area provided for a premium for all underground work of 13 cents an hour above that paid for comparable work performed on the surface.

ENTRANCE RATES FOR MALE COMMON LABOR

The wage schedule adopted by the War Labor Board for fluorspar operations in the Illinois-Kentucky district included set hourly rates for common labor. In Illinois, the rate for underground common labor is 76 cents an hour and that for common labor outside the mines is 63 cents. In Kentucky, the common labor rates are 66 cents and 53 cents, respectively, for underground and surface work. In the western States, 12 of the 14 companies studied reported established entrance rates for male common labor. Although some of these rates ranged as high as 80 cents an hour, 8 of the companies paid rates of between 50 and 60 cents.

AVERAGE HOURLY EARNINGS BY OCCUPATION

Straight-time average hourly earnings for 2,038 workers classified into 31 selected occupational groups are shown by region in the accompanying table. Separate figures are given for mines and mills only for processing occupations. With respect to the other occupations, many of which are common to both mines and mills, it was not feasible to present separate figures, as the same workers, particularly in maintenance work, commonly serve both the mine and the mill.

For the country as a whole, straight-time average hourly earnings for all workers studied ranged from 54.8 cents for rock breakers to 96.3 cents for working foremen. Nearly one-half (48 percent) of the workers were in occupations with earnings of less than 70 cents an hour, and all but one-eighth were found in occupations averaging 85 cents or less. The two largest occupational groups, drift and stope miners and muckers, had average hourly earnings of 80.1 cents and 69.9 cents, respectively.

In general, workers employed in the processing occupations in the mills were paid substantially lower hourly rates than those employed in processing occupations in the mines. Workers in only two milling occupations were paid average hourly earnings amounting to 70 cents or more, whereas more than three-fourths of all the mill workers were accounted for by the seven occupations for which average earnings were below 65 cents. All workers in processing occupations in the mines, on the other hand, had average hourly earnings amounting to well over 65 cents, and the five occupations for which average earnings were 80 cents an hour or more accounted for fully six-tenths of the workers engaged in underground processing work. These differences between the average earnings shown for underground and surface workers result, in part, from the general policy of paying higher wages for underground work.

Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Fluorspar Mines and Mills, by Region, September 1943

Occupation	United States total		Rosiclare field						Western States	
			Total		Illinois		Kentucky			
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Maintenance:										
Blacksmiths	24	$0.807	14	$0.814	8	$0.906	6	$0.692	10	$0.787
Carpenters	44	.869	30	.810	21	.840	9	.741	14	.966
Electricians	7	.833	7	.833	6	.842	1	(1)		
Machinists	36	.895	30	.841	23	.858	7	.783	6	1.167
Maintenance men, general	24	.774	14	.779	3	.917	11	.742	10	.788
Supervision:										
Working foremen, processing departments	78	.963	42	1.004	23	1.057	19	.939	36	.915
Processing—Mining:										
Cagers, inside	13	.785	13	.785	11	.800	2	(1)		
Loading-machine operators	16	.900	16	.900	16	.900				
Miners, drift and stope	461	.801	243	.852	132	.898	111	.798	[2] 218	.763
Miners, raise and shaft	60	.874	60	.874	17	.935	43	.850		
Muckers	329	.699	167	.756	161	.760	6	(1)	162	.640
Pumpmen	15	.672	15	.672	1	(1)	14	.666		
Timbermen	52	.850	32	.900	32	.900			20	.769
Trackmen, inside	27	.885	25	.900	25	.900			2	(1)
Processing—Milling:										
Ball-mill operators	30	.620	6	.713	2	(1)	4	(1)	24	.597
Crusher feeders	25	.554	25	.554	6	.630	19	.530		
Crusher operators	20	.668	2	(1)	2	(1)			18	.635
Filter operators	11	.649	3	.780	3	.780			8	(1)
Flotation operators	32	.765	12	.809	11	.821	1	(1)	20	.729
Helpers, processing machines	63	.626	29	.668	26	.678	3	.580	34	.590
Jig operators	37	.732	33	.723	15	.790	18	.675	4	(1)
Log-washer feeders	25	.562	25	.562	8	.630	17	.530		
Rock breakers	33	.548	33	.548	6	.630	27	.530		
Rock pickers	85	.598	85	.598	57	.631	28	.530		
Inspection and testing:										
Samplers	12	.688	10	.665	9	.674	1	(1)	2	(1)
Material movement:										
Hoistmen	130	.703	98	.713	46	.772	52	.660	32	.673
Loaders and unloaders	103	.580	77	.577	36	.631	41	.530	26	.588
Motormen, inside	14	.893	14	.893	13	.900	1	(1)		
Trammers	132	.679	98	.713	53	.760	45	.658	34	.578
Truck drivers	32	.661	24	.655	17	.680	7	.593	8	.663
Custodial:										
Watchmen	68	.623	66	.620	58	.631	8	.542	2	(1)

[1] Too few workers and/or plants to warrant computation of an average.
[2] Includes raise and shaft miners, for whom separate figures were not reported.

In the Rosiclare field, which includes the entire Illinois-Kentucky fluorspar-mining area, average hourly earnings ranged from 54.8 cents an hour for rock breakers to $1.004 for working foremen. One-third of the workers in the entire area were in occupations in which average hourly earnings ranged from 81 to 90 cents an hour, and another third of the workers were employed in occupations for which earnings averaged between 71 and 80 cents an hour.

Straight-time average hourly earnings shown for workers in the Rosiclare field differ slightly, in some instances, from the rates set by the War Labor Board. The differences between the earnings figures shown in the Bureau's study and the rates set by the Board are due, in part, to the inclusion in the Bureau's survey of a few small plants in which the established rates were not in effect. Moreover, separate rates were set by the Board for various skill classifications within a number of the occupations. Because of the limited number of workers employed in some of these classifications, it was not feasible to show separate earnings data for classes within occupations.

In Illinois, the rates established by the Board ranged from 63 cents an hour for common laborers employed in surface work, to $1.05 an hour for working foremen in the mines. The corresponding hourly rates established for Kentucky operations ranged from 53 cents for common laborers to 95 cents for working foremen.

In Illinois mines and mills, average hourly earnings in excess of $1.00 an hour were received only by working foremen. Occupations in which average hourly earnings ranged from 75 to 85 cents an hour accounted for nearly four-tenths of the workers, and over one-fourth of the workers were in occupations averaging under 70 cents an hour. In Kentucky operations, workers in only two occupations—raise and shaft miners and working foremen—were paid average hourly earnings above 80 cents an hour. Well over one-fourth of the workers were concentrated in occupations for which hourly earnings ranged between 70 and 80 cents. Average earnings below 60 cents an hour were paid to workers in 8 occupations, comprising nearly three-tenths of the workers. A general weighted average, based on identical occupations, shows that average hourly earnings for workers in the Illinois mines and mills were approximately 10 cents higher than for those employed in the Kentucky operations. This difference, it will be noted, is in line with the policy followed by the War Labor Board in establishing wage scales for the fluorspar industry in these two States.

Straight-time average hourly earnings for fluorspar operations in the western States, which are not covered by the wage-stabilization order, ranged from 57.8 cents for trammers to $1.167 for machinists. Nearly one-half of all the workers studied were in occupations with average earnings below 70 cents an hour, while over four-tenths of the workers were in occupations for which average hourly earnings ranged from 70 to 80 cents. Because separate figures were not available for raise and shaft miners, one average is shown for all miners in this area. The workers included in this occupation constituted the largest group in the region and earned an average of 74.3 cents an hour at the time of the survey.

Wage Rates in Office-Building Service, Spring and Summer of 1943[1]

Summary

MEDIAN wage rates of building-service employees in 42 large cities surveyed by the Bureau of Labor Statistics, in the spring and summer of 1943, were found to vary from 42 cents for women elevator operators to 96 cents for class A stationary engineers. Median figures for the other occupational classifications covered were 45 cents for male elevator operators, 48 cents for male cleaners as well as for watchmen, 63 cents for both firemen and window washers, 79 cents for class B stationary engineers, and 43 cents for women cleaners. The highest rates were reported in the Pacific Coast-Mountain area and in Eastern cities, and the lowest wages were reported for Southern cities. Individual establishments in some cities were found to be paying women cleaners as little as 12 and 14 cents an hour.

Characteristics of the Industry

Whereas, formerly, the occupants of the office buildings were responsible for the cleaning and heating of the premises they leased, today most office-building owners provide service and maintenance for entire buildings. The workers engaged in providing this service, in office buildings alone, probably number 100,000.

The labor force.—The labor force employed by office buildings consists mainly of unskilled workers. Exceptions are stationary engineers and maintenance carpenters and electricians, who are skilled, and firemen, who may be classified as semiskilled workers. Both men and women are employed in the numerically important occupations of elevator operators and cleaners. In the buildings covered by the survey of wage rates conducted by the Bureau of Labor Statistics, approximately the same number of each sex were employed as elevator operators, and more than twice as many women as men worked as cleaners. In the other unskilled occupations surveyed, as well as in the occupations of firemen and stationary engineers and as skilled maintenance workers, male workers were employed exclusively.

Service and maintenance employees, with the possible exception of window washers, are time workers. Frequently they are paid on a weekly or monthly basis and, although most service and maintenance employees work a normal week of 40 to 48 hours, the cleaning women usually average about 33 to 36 hours a week, working at night. Many office building employers pay time and a half for work after 8 hours a day or 40 hours a week. Shift differentials, moreover, are rare although some elevator operators are employed at night.

Approximately one-fourth of the office buildings in the cities included in this report were unionized. Union agreements were found most frequently in the larger cities. All office buildings covered in San Francisco and Seattle were unionized, but of the 7 cities shown in

[1] Prepared in the Bureau's Division of Wage Analysis by Margaret R. Cavallo under the supervision of Lily Mary David.

the Pacific-Mountain area these were the only ones in which union establishments were reported. One half or more of the establishments included in the survey in Pittsburgh, Chicago and Minneapolis-St. Paul were operating under union agreements. Atlanta was the only city in the South where unionized buildings were reported. Union agreements were rarely encountered in the cities classified here as "border" (i. e., Baltimore, Louisville, Richmond, and Washington, D. C.); only a few of the office buildings covered in Baltimore and Washington had agreements with labor organizations. All cities in the East reported some unionized establishments, although a very small proportion of the buildings in Buffalo were unionized. In the Middle West only Chicago, Minneapolis-St. Paul, Milwaukee, and Cincinnati reported any appreciable number of establishments with union contracts.

Scope of Data

The data on earnings of office-building service employees were collected as part of the Bureau's survey of occupational wage rates, which includes within its scope characteristic industries in cities of 25,000 or more. Office buildings were covered only in cities of 100,000 or more, in which such buildings are typically found in significant numbers.

This article presents information on wage rates in building service in 42 cities. These include 12 of the 14 cities with a population of 500,000 or more, excluding only New York City and St. Louis, for which data are not at present available. All cities with a population of 250,000 to 500,000 are represented, except Rochester and Jersey City. Also included is a proportionately smaller group of cities with a population less than 250,000.

The information for each city covered by surveys of occupational wage rates is based on all or a representative sample of office buildings with 9 or more employees. In the main, the wage data refer to a pay-roll period in the spring or summer of 1943. The information for 4 cities, however, is for a January 1943 period.

The wage data presented consist of straight-time hourly rates of pay.[2] Premium overtime payments and shift differentials have been excluded. In the case of workers paid on a weekly or monthly basis, hourly rates were determined by dividing their earnings by normal hours of work. All workers covered by the Bureau's survey were paid at time rates.

Of the various service and maintenance occupations found in office buildings, 7 have been selected for presentation. A substantial proportion of all office-building service workers are classified in those jobs. Five of the classifications (firemen, class A stationary engineers, class B stationary engineers, watchmen, and window washers) were found to employ men exclusively, while two occupational classifications (cleaners and elevator operators) employed both men and women. Data were available in comparatively few cities for the occupational classifications of stationary engineers and window washers. In many cases the duties of stationary engineers did not

[2] Besides the general average rate for all workers in the occupation and city, the average hourly earnings in the office building with the highest and lowest earnings for the occupation are also presented. These are not necessarily the earnings of the lowest- and highest-paid individual workers in the area but are establishment averages for the specific occupations.

fit the rather rigid requirements of the Bureau's descriptions for this occupation. Window washing was found to be done on a contract basis in many cases, and in such instances was excluded from the Bureau's study.

The data presented were obtained by trained field representatives of the Bureau of Labor Statistics from pay rolls and related office-building records. The workers in each office building were classified by occupation in accordance with standard written descriptions to assure maximum comparability from one establishment to another.

Occupational Wage Rates

Three general levels of wage rates may be noted in comparing the occupational classifications covered. As would be expected, both classes of stationary engineers were paid appreciably higher rates than workers in other occupations. The pay of firemen and window washers was distinctly below that of stationary engineers, while cleaners, elevator operators, and watchmen received the lowest rates, with only minor differences in pay among the three jobs. The earnings of women cleaners and elevator operators were slightly lower than those recorded for male workers in these occupations.

Median average wage rates by occupation are presented in table 1. In arriving at these medians, no attempt has been made to give different weights to individual cities; however, the figures are useful for purposes of rough comparison. Examination of this table indicates that class A stationary engineers averaged 96 cents, and class B stationary engineers, 79 cents an hour in the median city in which such workers were reported. The median city averages for male cleaners, elevator operators, and watchmen ranged from 45 cents to 48 cents an hour. For women cleaners the median average was 43 cents, and for women elevator operators it was 42 cents. The median city average for both firemen and window washers was 63 cents. It will be noted that there is an appreciable spread in the rates of firemen and window washers in the individual regions. The rates of window washers appear to be influenced by the danger involved and by the fact that they are employed mainly in the larger buildings.

Office-building workers in the Pacific Coast and Mountain area and in the East generally received the highest rates of pay, and those in the South had the lowest rates. Rates paid in Middle Western and Border cities fell between these two limits; in most cases the level in Middle Western cities was closer to the higher-wage areas than to the Southern level, while rates in the Border cities were closer to those in the Southern communities. Although the figures presented in table 1 are, in some cases, based on relatively few cities and are consequently somewhat unstable, these interregional variations may also be observed in table 2, which presents data by individual community.

Among individual cities, average rates of pay in Albany, Chicago, Seattle, San Francisco, Pittsburgh, and Detroit were generally high. It will be noted that there was wide variation in rates between the highest and lowest establishments within each city.

Data for class A stationary engineers were available for only a few cities. The highest average rate ($1.17) was paid in Chicago and the lowest (71 cents) in Jacksonville. The highest average for class B stationary engineers was also found in Chicago ($1.09), and the lowest average for this classification (50 cents) was paid in San Antonio.

In general, the highest average wage rates for cleaners, elevator operators, occupations employing both men and women, and watchmen, were found in the Eastern and Pacific Coast cities. Median rates for these occupations varied from 45 cents for women elevator operators to 56 cents for male elevator operators and watchmen in the East, and from 45 cents for male elevator operators to 57 cents for watchmen in the Pacific-Mountain region. The lowest averages were found in Southern localities, where the medians ranged from 31 cents to 42 cents. With median average wage rates ranging from 42 cents to 54 cents for the three occupations, the Middle West was only slightly below the East and Pacific-Mountain areas.

TABLE 1.—*Median Average Wage Rates* [1] *in Selected Occupations in Office Buildings in 42 Cities, Spring and Summer of 1943*

Region [2]	Cleaners, male	Cleaners, female	Elevator operators, male	Elevator operators, female	Firemen	Stationary engineers, class A [3]	Stationary engineers, class B [4]	Watchmen	Window washers
Total, 42 cities	$0.48	$0.43	$0.45	$0.42	$0.63	$0.96	$0.79	$0.48	$0.63
East	.54	.46	.56	.45	.69	.97	.90	.56	.71
Border States	.42	.37	.45	.42	.53	-------	.79	.46	.50
South	.36	.31	.40	.35	.50	.92	.66	.42	.39
Middle West	.50	.45	.54	.42	.64	.96	.75	.50	.78
Pacific and Mountain	.53	.50	.45	.51	(5)	(5)	.83	.57	.71

[1] Excludes premium payments for overtime and late shift work.
[2] For cities included in each region, see table 2.
[3] Stationary engineers, class A, operate air-conditioning and/or refrigerating equipment, in addition to heating equipment.
[4] Stationary engineers, class B, operate only heating equipment.
[5] Information available for too few cities to show median.

The highest rates for firemen were paid in the East, with a median city average of 69 cents. Among individual cities, however, Chicago paid the highest wage rate (88 cents).

The median city average for window washers for the Middle West was 78 cents, while the East and Pacific-Mountain areas reported identical median city averages of 71 cents. The Southern cities paid relatively low wages to both firemen and window washers.

TABLE 2.—*Hourly Wage Rates* [1] *of Workers in Selected Occupations in Office Buildings in 42 Large Cities, Spring and Summer of 1943* [2]

City	Cleaners, male			Cleaners, female			Elevator operators, male		
	General average	Lowest establishment average	Highest establishment average	General average	Lowest establishment average	Highest establishment average	General average	Lowest establishment average	Highest establishment average
East:									
Albany, N. Y.				$0.56	$0.50	$0.72	$0.65	$0.56	
Boston, Mass.	$0.42	(3)	(3)	.46	.40	.59	.49	.38	
Buffalo, N. Y.	.53	$0.48	$0.70	.44	.39	.57	.33	(3)	
Newark, N. J.	.59	.40	.70	.46	.40	.50	.56	.38	
Philadelphia, Pa. [4]	.54	.35	.66	.43	.33	.57	.63	.34	
Pittsburgh, Pa. [4]	.63	.42	.88	.48	.37	.63	.69	.48	
Providence, R. I.	.50	.39	.69	.45	.33	.51	.42	.40	
Border States:									
Baltimore, Md. [4]	.44	.35	.54	.40	.30	.52	.49	.38	
Louisville, Ky. [5]	.39	.30	.73	.33	.30	.35	.39	.30	
Richmond, Va. [4]	.37	.30	.43	.30	.23	.43	.43	.31	
Washington, D. C.	.49	.39	.58	.43	.37	.80	.47	.35	
South:									
Atlanta, Ga.	.33	.28	.46	.25	.20	.39	.45	.33	
Birmingham, Ala.	.34	.30	.38	.26	.22	.31	.35	.30	
Charlotte, N. C. [6]	.30	.30	.30	.30	.30	.30			
Dallas, Tex. [4]	.40	.30	.58	.31	.24	.40	.42	.36	
Houston, Tex. [7]	.43	.28	.60	.41	.30	.74	.45	.29	
Jacksonville, Fla. [5]	.35	.14	.40	.30	.12	.35	.33	.19	
Knoxville, Tenn. [5]	.39	.30	.47	.31	.28	.34	.40	.30	
Memphis, Tenn.	.32	.30	.38	.30	.30	.38	.41	.36	
Miami, Fla. [6]	.43	.38	.54	.33	.30	.46	.31	.14	
New Orleans, La.	.33	.28	.40	.28	.14	.38	.41	.31	
Oklahoma City, Okla. [7]	.38	.30	.47	.32	.26	.44	.30	.26	
San Antonio, Tex.	.36	.24	.44	.31	.24	.40	.33	.28	
Middle West:									
Chicago, Ill. [6]	.65	.56	.88	.48	.46	.50	.74	.49	
Cincinnati, Ohio [7]	.54	.41	.61	.43	.35	.50	.55	.38	
Cleveland, Ohio [6]				.47	.40	.53	.58	.47	
Columbus, Ohio	.45	.33	.53	.42	.38	.45	.43	.30	
Detroit, Mich. [6]	.62	.48	.75	.52	.37	.64	.61	.38	
Fort Wayne, Ind. [6]	.49	.44	.61	.43	(3)	(3)	.39	.34	
Grand Rapids, Mich.	.53	.39	.60	.45	.33	.50	.37	.26	
Indianapolis, Ind. [6]	.46	.35	.73	.40	.32	.48	.46	.35	
Kansas City, Mo.	.38	.35	.46	.35	.33	.43			
Milwaukee, Wis. [6]	.50	.47	.56	.47	.40	.50	.54	.38	
Minneapolis-St. Paul, Minn. [6]	.54	.33	.62	.48	.38	.67	.53	.41	
Toledo, Ohio	.50	.48	.56	.45	.43	.51	(3)	(3)	(3)
Pacific and Mountain:									
Denver, Colo. [6]	.46	.37	.55	.43	.34	.45	.40	.34	
Los Angeles, Calif.	.52	.47	.68	.50	.42	.55	.56	.40	
Portland, Oreg. [5]	.61	.57	.79	.55	.53	.62			
Salt Lake City, Utah [6]	.53	.46	.69	.45	.34	.86	.42	.29	
San Francisco, Calif. [7]	.67	.50	.94	.53	.45	.65	.66	.60	
Seattle, Wash.	.71	.63	.77	.56	.55	.70			
Spokane, Wash. [5]	.51	.41	.79	.44	.39	.62	.45	.40	

See footnotes at end of table.

TABLE 2.—*Hourly Wage Rates* [1] *of Workers in Selected Occupations in Office Buildings in 42 Large Cities, Spring and Summer of 1943* [2] —Continued

City	Elevator operators, female			Firemen			Stationary engineers, class A [10]		
	General average	Lowest establishment average	Highest establishment average	General average	Lowest establishment average	Highest establishment average	General average	Lowest establishment average	Highest establishment average
East:									
Albany, N. Y.	$0.45	$0.38	$0.47	$0.80	$0.62	$0.92			
Boston, Mass.	.41	.35	.48	.68	.40	.88			
Buffalo, N. Y.	.47	.35	.59	.64	.48	.88			
Newark, N. J.	.44	.40	.47	.74	.43	.98			
Philadelphia, Pa. [4]	.49	.37	.60	.70	.35	.88	$1.01	(3)	(3)
Pittsburgh, Pa. [4]	.53	.41	.61	.69	.46	1.06			
Providence, R. I.	.43	.33	.50	.63	.38	.88	.92	(3)	(3)
Border States:									
Baltimore, Md. [4]	.49	.44	.58	.53	.47	.72			
Louisville, Ky. [5]	.36	.35	.40	.53	.46	.56			
Richmond, Va. [6]	.31	.22	.38	.44	.32	.56			
Washington, D. C.	.48	.38	.54	.61	.43	.84			
South:									
Atlanta, Ga.	.43	.30	.48	.35	.30	.40	1.04	$0.91	$1.13
Birmingham, Ala.	.24	.23	.30	(3)	(3)	(3)			
Charlotte, N. C. [6]	.30	.27	.30	(3)	(3)	(3)			
Dallas, Tex. [4]	.38	.31	.51	.66	.44	.90	.92	.48	1.62
Houston, Tex. [7]	.42	.30	.51	.76	.72	.82	.92	.73	1.87
Jacksonville, Fla. [5]	.25	.16	.41	.42	.19	.88	.71	.47	1.16
Knoxville, Tenn. [5]	(3)	(3)	(3)	.50	.35	.70			
Memphis, Tenn.	.28	.12	.48	.48	(3)	(3)			
Miami, Fla. [8]	.40	.29	.49						
New Orleans, La.	.35	.19	.42	.62	.48	.83	1.04	.72	1.37
Oklahoma City, Okla. [7]	.33	.26	.43	(3)	(3)	(3)	.77	.50	.89
San Antonio, Tex.	.36	.28	.41				.79	.53	.94
Middle West:									
Chicago, Ill. [6]				.88	.51	.98	1.17	.79	1.63
Cincinnati, Ohio [7]	.41	.30	.58	.71	.44	.89	.96	.87	.98
Cleveland, Ohio [6]	.52	.35	.59				.89	.78	1.44
Columbus, Ohio	.41	.37	.46	.58	.44	.76			
Detroit, Mich. [6]	.50	.38	.62	.70	(3)	(3)	1.04	(3)	(3)
Fort Wayne, Ind. [5]	(3)	(3)	(3)	.52	.46	.66			
Grand Rapids, Mich.	.38	.32	.45	.44	(3)	(3)			
Indianapolis, Ind. [6]	.41	.32	.45	.47	(3)	(3)			
Kansas City, Mo.	.34	.30	.42						
Milwaukee, Wis. [6]	.45	(3)	(3)						
Minneapolis-St. Paul, Minn. [6]	.46	.43	.58	.71	.53	.84	.96	.86	.99
Toledo, Ohio	.42	.39	.48						
Pacific and Mountain:									
Denver, Colo. [6]	.44	.34	.46	.54	.45	.63			
Los Angeles, Calif.	.51	.44	.58				1.03	(3)	(3)
Portland, Oreg. [4]	.55	.49	.57						
Salt Lake City, Utah [6]	.41	.29	.43	.71	.59	.96			
San Francisco, Calif. [7]	.61	.47	.78						
Seattle, Wash.	.57	.50	.63						
Spokane, Wash. [6]	.41	.35	.56						

See footnotes at end of table.

TABLE 2.—*Hourly Wage Rates* [1] *of Workers in Selected Occupations in Office Buildings in 42 Large Cities, Spring and Summer of 1943* [2]—Continued

City	Stationary engineers Class B [11]			Watchmen			Window washers		
	General average	Lowest establishment average	Highest establishment average	General average	Lowest establishment average	Highest establishment average	General average	Lowest establishment average	Highest establishment average
East:									
Albany, N. Y.				$0.66	$0.60	$0.77	$0.82	$0.70	$0.92
Boston, Mass.	$0.86	$0.54	$1.14	.46	.30	.69	.66	.47	.86
Buffalo, N. Y.				.52	.35	.65	.73	.61	.84
Newark, N. J.				.64	.39	.85			
Philadelphia, Pa. [4]	.90	.77	.97	.56	.30	.72	.71	.62	.80
Pittsburgh, Pa. [4]	.89	.64	1.13	.63	.35	.94	.68	.47	.84
Providence, R. I.	.92	(3)	(3)	.47	.35	.73	(9)	(9)	(9)
Border States:									
Baltimore, Md. [4]	.79	(3)	(3)	.48	.26	.72	.59	.38	.75
Louisville, Ky. [5]	.76	.60	1.02	.37	.30	.52	(9)	(9)	(9)
Richmond, Va. [6]				.44	.21	.58	.43	.21	.70
Washington, D. C.	1.03	.59	1.36	.49	.30	.67	.50	.45	.53
South:									
Atlanta, Ga.	.96	.88	1.04	.44	.27	.57	.39	.35	.44
Birmingham, Ala.				.39	.23	.57			
Charlotte, N. C. [6]				.45	.30	.55			
Dallas, Tex. [4]	.77	.68	.90	.50	.30	.84	.45	.44	.47
Houston, Tex. [7]	.67	.48	.96	.37	.20	.60			
Jacksonville, Fla. [5]	.66	.52	1.03	.42	.22	.60	.39	.30	.46
Knoxville, Tenn. [5]				.48	.38	.54	.38	.28	.39
Memphis, Tenn.				.37	.12	.58	.39	(9)	(9)
Miami, Fla. [6]				.68	.46	.82			
New Orleans, La.	.65	.51	.74	.33	.25	.43	.34	.29	.40
Oklahoma City, Okla. [7]	.66	.54	.77	.42	.38	.49	.50	(9)	(9)
San Antonio, Tex.	.50	.44	.58	.42	.17	.72			
Middle West:									
Chicago, Ill. [5]	1.09	.55	1.48	.54	.35	.81	.99	.68	1.41
Cincinnati, Ohio [7]	.91	.66	1.02	.48	.32	.60	.67	.52	.85
Cleveland, Ohio [8]				.50	.30	.64	.81	.72	.90
Columbus, Ohio	.69	.53	.75	.47	.35	.63			
Detroit, Mich. [4]				.67	.35	.83	.84	.73	1.00
Fort Wayne, Ind. [6]	.65	.53	.74	(9)	(9)	(9)			
Grand Rapids, Mich.	.75	(3)	(3)						
Indianapolis, Ind. [6]	.72	(3)	(3)	.48	.34	.68	.57	.53	.59
Kansas City, Mo.	.70	.58	.84						
Milwaukee, Wis. [6]				.57	.34	.72	.77	(9)	(9)
Minneapolis-St. Paul, Minn. [6]	.95	.72	1.01	.55	.38	.64	.63	.53	.74
Toledo, Ohio	.81	.74	.96	.46	.40	.51	.78	(9)	(9)
Pacific and Mountain:									
Denver, Colo [6]	.71	.50	.84	.44	.36	.50	.43	.37	.50
Los Angeles, Calif.	.79	.60	1.04	.48	.35	.58	(9)	(9)	(9)
Portland, Oreg. [6]				.61	.55	.68			
Salt Lake City, Utah [6]	.86	.67	1.21	.57	.48	.81	.57	.48	.65
San Francisco, Calif. [7]	.94	.82	1.09	.66	.56	.77	.84	.44	1.06
Seattle, Wash.				.71	.69	.75	.93	.75	1.13
Spokane, Wash. [9]				.49	.41	.56			

[1] Exclude premium payments for overtime and late shift work.
[2] April 1943, unless otherwise noted.
[3] Omitted to avoid disclosure of individual establishments.
[4] Data refer to January 1943 pay-roll period.
[5] Data refer to June 1943 pay-roll period.
[6] Data refer to July 1943 pay-roll period.
[7] Data refer to March 1943 pay-roll period.
[8] Data refer to May 1943 pay-roll period.
[9] Number of establishments and/or workers too few to justify computation of an average.
[10] Stationary engineers, Class A, operate air-conditioning and/or refrigerating equipment, in addition to heating equipment.
[11] Stationary engineers, Class B, operate only heating equipment.

Union Wages and Hours in the Baking Industry, July 1, 1943[1]

Summary

THE average hourly wage rate of union bakery workers in 65 cities surveyed by the Bureau of Labor Statistics was $0.847 on July 1, 1943. Actual rates ranged from $0.338 for first-year female workers in bread and cake machine shops in Memphis to $1.714 for first hands in Hebrew machine shops in New York. Among the different branches of the industry, union members in Hebrew baking had the highest average hourly rate ($1.404), and those in the pie and pastry branch had the lowest ($0.655).

Comparable quotations for the 2 years show that hourly rates advanced 3.1 percent during the 13-month period from June 1, 1942, to July 1, 1943, and that almost half the union members received raises. Pie and pastry and other specialized bake shops received the highest relative increases (4.9 and 4.7 percent respectively) during this period. The general level of wages rose almost 20 percent after 1939, to an index of 119.8 (table 1).

Three-fourths of the union members had a basic 40-hour workweek in 1943. The other members had basic workweeks ranging from 28 to 54 hours. There was no change in hours during the year for over 97 percent of the union members. There was very little change in straight-time hours during the period 1939–43, the index having declined only 1.4 percent since 1939. Time and a half for overtime was provided in 98 percent of the quotations, covering almost 92 percent of the members in 1943.

TABLE 1.—*Indexes of Hourly Wage Rates and Weekly Hours for Union Bakery Workers, 1939–43*

Year	Indexes (1939=100) of—	
	Rates per hour	Hours per week
1939	100.0	100.0
1940	102.7	99.5
1941	106.1	99.2
1942	116.3	99.1
1943	119.8	98.6

Scope and Method of Survey

This study is one of a series of annual surveys of union wages and hours in various trades, started in 1907. The early studies included 39 cities. The coverage has been gradually extended to include 75 cities in 40 States and the District of Columbia. Effective union agreements providing wage and hour scales for bakery workers were

[1] Prepared in the Bureau's Industrial Relations Division.

reported in 65[2] of these cities in 1943, and this survey included 3,641 quotations covering 63,391 union members.

Field representatives of the Bureau collected the data directly from some responsible official of each local union, and where possible the scales were checked against written agreements. The scales collected were those actually in effect on July 1, 1943. Scales in negotiation or before the National War Labor Board at the time the representatives called were further checked before the data were tabulated, and increases retroactive to July 1 are included in this report.

Averages.—The averages and percentages of change given in this report are weighted according to the number of union members covered by each scale. The average thus reflects not only the actual scales of wages and hours provided in union agreements, but also the number of members benefiting from these scales.

Changes in coverage.—Prior to 1939 only union members engaged principally in bread baking were included. In 1939 and 1940, all types of baking and all occupations (except truck drivers and other deliverymen), covered by union agreements were included. Since that time plant-maintenance workers as well as drivers and other deliverymen have been excluded from the tabulations. Because of these changes in coverage the averages shown in reports through the years are not comparable. The percentage changes in wage rates and hours, and the index numbers shown in table 1 above, however, are based on comparable quotations only for the 2 years considered in each report, and these, rather than the yearly averages, should be used to determine trends for the bakery trades.

Since 1941 the data have been classified according to the various types of baking; separate figures are shown for hand shops, machine shops, Hebrew baking, other specialized baking, pie and pastry shops, and cracker and cookie shops. Other specialized shops include those baking French, Polish, Bohemian, Scandinavian, Spanish, and Italian products.

Average Hourly Wage Rates

On July 1, 1943, the average hourly rate for all union bakery workers in the 63 cities was $0.847. Nearly three-fourths of the union members were earning between 50 cents and $1 per hour, over 45 percent being covered by rates between 70 cents and $1. Fewer

[2] Union scales were obtained in the following cities:

Atlanta, Ga.
Baltimore, Md.
Binghamton, N. Y.
Birmingham, Ala.
Boston, Mass.
Buffalo, N. Y.
Butte, Mont.
Charlotte, N. C.
Chicago, Ill.
Cincinnati, Ohio.
Cleveland, Ohio.
Columbus, Ohio.
Dallas, Tex.
Dayton, Ohio.
Denver, Colo.
Des Moines, Iowa.
Detroit, Mich.
Duluth, Minn.
Grand Rapids, Mich.
Houston, Tex.
Indianapolis, Ind.
Jacksonville, Fla.
Kansas City, Mo.
Little Rock, Ark.
Los Angeles, Calif.
Louisville, Ky.
Madison, Wis.
Manchester, N. H.
Memphis, Tenn.
Milwaukee, Wis.
Minneapolis, Minn.
Nashville, Tenn.
Newark, N. J.
New Haven, Conn.
New Orleans, La.
New York, N. Y.
Oklahoma City, Okla.
Omaha, Nebr.
Peoria, Ill.
Philadelphia, Pa.
Phoenix, Ariz.
Pittsburgh, Pa.
Portland, Oreg.
Providence, R. I.
Reading, Pa.
Richmond, Va.
Rochester, N. Y.
Rock Island (Ill.) district (includes Davenport, Iowa, and Moline, Ill.)
St. Louis, Mo.
St. Paul, Minn.
Salt Lake City, Utah.
San Francisco, Calif.
Scranton, Pa.
Seattle, Wash.
South Bend, Ind.
Spokane, Wash.
Springfield, Mass.
Tampa, Fla.
Toledo, Ohio
Washington, D. C.
Wichita, Kans.
Worcester, Mass.
Youngstown, Ohio.

than 5 percent had scales of less than 50 cents, while 24 percent received $1 per hour or more (table 2). Individual rates ranged from $0.338 for all first-year female workers in bread and cake machine shops in Memphis to $1.714 for first hands in Hebrew machine shops in New York.

TABLE 2.—*Distribution of Union Members in the Bakery Trades, by Hourly Wage Rates, July 1, 1943*

Type of baking	Average rate per hour	Percent of union members whose rates (in cents) per hour were—													
		Under 40	40 and under 50	50 and under 60	60 and under 70	70 and under 80	80 and under 90	90 and under 100	100 and under 110	110 and under 120	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and over
All baking	$0.847	0.4	4.4	16.3	10.0	17.0	14.1	14.2	8.6	3.8	2.8	2.0	2.4	1.4	2.6
Ordinary bread and cake, hand	.999	(1)	.8	3.9	1.5	11.2	14.4	19.2	27.2	9.8	2.6	.1	1.8	2.4	5.1
Ordinary bread and cake, machine	.798	.3	4.3	16.4	8.2	22.5	17.6	16.8	5.8	2.6	2.7	1.9	.3	.5	.1
Pie and pastry	.655	.3	9.2	35.7	22.5	9.5	13.8	4.9	2.9	.9	.3	----	----	----	----
Cracker and cookie	.656	1.6	9.5	32.2	26.1	11.0	8.2	8.7	2.5	.2	----	----	----	----	----
Hebrew baking	1.404	----	.5	.1	.8	.1	1.8	2.2	8.9	3.4	7.0	10.2	27.6	11.2	26.2
Other specialized baking [2]	.986	----	.4	2.8	4.1	13.5	8.2	14.7	23.8	21.9	8.7	1.9	----	----	----

[1] Less than a tenth of 1 percent.
[2] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.

Union members in ordinary bread and cake hand shops had an average rate of 99.9 cents per hour. About half of these members earned less than $1 per hour, over 27 percent earned between $1 and $1.10, while 22 percent received at least $1.10 per hour and some of them substantially more. The highest rate ($1.70 per hour) was reported for union members in some retail hand shops in New York. The average for machine shops, which usually employ a large number of female packers, wrappers, and icers, was 79.8 cents, far below the hand-shop average. Almost 57 percent of these members had rates between 70 cents and $1; over 20 percent received rates of less than 60-cents, in contrast to hand-shop workers, where less than 5 percent had rates in that range.

The highest average wage rate for any branch of the baking industry ($1.404) was received by members in Hebrew baking shops, two-thirds of whom were in New York City. Over a quarter of the total members in this branch earned at least $1.60 per hour and over three-fourths had rates of $1.30 or more. Only 5.5 percent had rates of less than $1.

Rates in other specialized bakeries averaged $0.986 per hour; over three-fifths had rates between 90 cents and $1.20. A large proportion of the union members in this branch were in large metropolitan areas.

Cracker and cookie and pie and pastry workers continued to be the lowest-paid members in the industry, with averages of $0.656 and $0.655 respectively. A substantial majority of these workers received between 50 and 70 cents per hour; over 9 percent reported rates of less than 50 cents, and fewer than 5 percent had rates of as much as $1 per hour.

DISTRIBUTION OF UNION BAKERY WORKERS
BY HOURLY WAGE RATES
JULY 1, 1943
PERCENT OF MEMBERSHIP
20
15
10
5
0
UNDER $.40
$.40 AND UNDER .50
.50 AND UNDER .60
.60 AND UNDER .70
.70 AND UNDER .80
.80 AND UNDER .90
.90 AND UNDER 1.00
1.00 AND UNDER 1.10
1.10 AND UNDER 1.20
1.20 AND UNDER 1.30
1.30 AND UNDER 1.40
1.40 AND UNDER 1.50
1.50 AND UNDER 1.60
1.60 AND OVER
HOURLY WAGE RATE
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

No distribution of union members by occupation has been attempted in this report, because of the lack of uniformity in occupational designations in the industry. Generally speaking, mixers, ovenmen, and first hands received the highest scales in individual shops; pan cleaners and female packers and wrappers the lowest.

Weekly Hours

The average straight-time workweek for all union bakery workers was 40.8 hours on July 1, 1943. The longest hours on the average (44.6) were worked in the bread and cake hand shops. The 40-hour week was predominant, covering 75 percent of the union members (table 3). Over 9 percent worked a 48-hour week at straight time, the longest hours reported (54 per week) being for some of the Italian bakeries in Brooklyn.

Hebrew shops had the shortest average weekly hours (39.4), and the shortest actual hours (28 per week in some New York shops). This branch also reported the largest percentage (35.3) of members with workweeks of less than 40 hours, although two-fifths were on a 45-hour schedule. The extent of the short workweek in Hebrew bakeries is due exclusively to share-the-work plans that are still in effect in some bakeries in New York.

All of the union members in the cracker and cookie branch worked a basic 40-hour week, while over 90 percent of those employed in ordinary bread and cake machine shops and over 85 percent of those in the pie and pastry branch of the industry had the same basic workweek. In contrast, almost three-fourths of the members in bread and cake hand shops had a basic week exceeding 40 hours, over 43 percent of them working 48 hours. Almost two-thirds of those in specialized bakeries had workweeks in excess of 40 hours, and nearly 44 percent worked 48 hours.

TABLE 3.—*Distribution of Union Members in the Bakery Trades, by Hours per Week, July 1, 1943*

Weekly hours	Percent of union members with specified hours per week						
	All baking	Ordinary bread and cake, hand shops	Ordinary bread and cake, machine shops	Pie and pastry	Cracker and cookie	Hebrew baking	Other specialized baking[1]
28 hours	1.1					14.3	
30 hours	1.6					21.0	
35 hours	.3		[2]				7.4
36 hours	1.4		2.4				
37½ hours	.1						3.4
38 hours	.9		1.5				
39 hours	.1						2.2
40 hours	75.0	25.4	90.1	85.3	100.0	8.9	22.4
42 hours	3.3	12.6	2.2				14.2
42½ hours	[2]			.2			
43 hours	.3			7.6			
44 hours	1.6	5.1	1.7	.6		.2	
45 hours	4.7	13.8	.1			39.8	.8
47 hours	.1					.8	
48 hours	9.3	43.1	2.0	6.3		15.0	43.6
54 hours	.2						6.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average weekly hours	40.8	44.6	40.2	40.8	40.0	39.4	44.2

[1] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.
[2] Less than a tenth of 1 percent.

Changes in Hourly Wage Rates and Weekly Hours, 1942 to 1943

WAGE RATES

The general level of wage rates advanced 3.1 percent during the 13-month period from June 1, 1942, to July 1, 1943. Among the individual branches, pie and pastry and other specialized baking had the highest percentage of increases during this period (4.9 and 4.7 percent respectively), and Hebrew baking had the lowest (1.9 percent). Over 46 percent of the quotations, covering slightly less than half of the union members, indicated increases in scales, while no decreases were reported (table 4).

The cracker and cookie and the pie and pastry branches, the lowest paid in the industry, had the largest percentage of their members receiving increases (67.8 and 59.9 percent respectively). Almost half the members in the bread and cake hand shops also received raises. Hebrew baking reported the smallest number of members (28.1 percent) having advances in scales.

TABLE 4.—*Changes in Union Wage Rates and Percent of Members Affected, June 1, 1942, to July 1, 1943*

Type of baking	Number of comparable quotations	Number of quotations showing—		Percent of union members affected by—	
		Increase	No change	Increase	No change
All baking	3,304	1,525	1,779	43.1	51.9
Ordinary bread and cake, hand	278	109	169	49.3	50.7
Ordinary bread and cake, machine	1,969	846	1,123	45.0	55.0
Pie and pastry	96	43	53	59.9	40.1
Cracker and cookie	759	442	317	67.8	32.2
Hebrew baking	109	47	62	28.1	71.9
Other specialized baking [1]	93	38	55	41.8	58.2

[1] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.

About 92 percent of those receiving increases and 44 percent of all members included in the survey received advances of less than 15 percent; 4 percent of all members received increases of 15 percent or more (table 5). In the cracker and cookie branch almost 80 percent of those obtaining increases received less than 10 percent; in the pie and pastry branch about 99 percent of those receiving increases obtained from 5 to 15 percent. The largest increases reported (33⅓ percent) were received by bench hand helpers on Italian bread in Philadelphia, and by first hands in Hebrew bakeries in Queens.

TABLE 5.—*Extent of Increases in Union Wage Rates from June 1, 1942, to July 1, 1943*

Type of baking	Number of quotations showing increases of—							Percent of total members affected by increases of—						
	Under 5 percent	5 and under 10 percent	10 and under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 percent and over	Under 5 percent	5 and under 10 percent	10 and under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 percent and over
All baking	381	622	369	105	21	18	9	16.6	14.3	13.2	3.0	0.6	0.2	0.2
Ordinary bread and cake, hand	21	35	33	10	7	3	-----	11.8	16.8	18.0	1.7	.6	.4	-----
Ordinary bread and cake, machine	178	393	203	63	6	1	2	13.1	14.6	13.7	3.2	.3	(1)	.1
Pie and pastry	1	22	16	2	2	-----	-----	.3	23.4	35.7	.1	.4	-----	-----
Cracker and cookie	166	137	98	19	5	13	4	43.1	10.4	9.6	2.1	1.7	.7	.2
Hebrew baking	14	21	7	3	-----	1	1	8.5	14.0	1.0	3.9	-----	.4	.3
Other specialized baking [2]	1	14	12	8	1	-----	2	.3	12.4	14.7	9.2	2.6	-----	2.6

[1] Less than a tenth of 1 percent.
[2] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.

HOURS OF WORK

About 97 percent of the quotations, affecting over 97 percent of the union members, recorded no change in the basic workweek from June 1, 1942, to July 1, 1943 (table 6). The average workweek decreased 0.5 percent during this period; 2.2 percent of the members had their hours decreased; and 0.7 percent had their hours increased. Specialized baking was the only branch that had a substantial number of members affected by hour changes. In this branch 14.1 percent had their hours decreased while for 4.4 percent hours were increased.

TABLE 6.—*Changes in Weekly Hours and Percent of Members Affected, June 1, 1942, to July 1, 1943*

Type of baking	Number of comparable quotations	Number of quotations showing—			Percent of union members affected by—		
		Increase	Decrease	No change	Increase	Decrease	No change
All baking	3,304	24	81	3,199	0.7	2.2	97.1
Ordinary bread and cake, hand	278	1	-----	277	.7	-----	99.3
Ordinary bread and cake, machine	1,969	17	62	1,890	.4	2.4	97.2
Pie and pastry	96	-----	10	86	-----	1.8	98.2
Cracker and cookie	759	-----	-----	759	-----	-----	100.0
Hebrew baking	109	2	2	105	2.5	3.1	94.4
Other specialized baking [1]	93	4	7	82	4.4	14.1	81.5

[1] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.

Overtime

Time and a half was the predominant overtime rate according to union agreements on July 1, 1943. Most of the quotations (98 percent), covering about 92 percent of the union members, provided this penalty rate (table 7).

All of the members in the pie and pastry and cracker and cookie branches received time and a half if they worked beyond their regular hours. Only in Hebrew shops and bread and cake hand shops were there many members not covered by penalty scales; in the former almost two-thirds of the union members received no extra rate for work beyond their normal hours, including members working under contracts which prohibited overtime work. A New York agreement which covered over one-third of the total workers in Hebrew bakeries included in the survey provided that employers must use substitute workers, when supplied by the union, after regular employees had worked 28 or 30 hours per week. One-eighth of the members in bread and cake hand shops were not covered by any penalty scale, most of these being in cake hand shops in New York where overtime was prohibited.

TABLE 7.—*Overtime Rates Provided in Union Bakery Agreements, July 1, 1943*

Type of baking	Number of quotations showing initial overtime rates of—			Percent of union members having initial overtime rates of—		
	Time and a half	No penalty rates specified	Other penalty rates	Time and a half	No penalty rates specified	Other penalty rates
All baking	3,567	49	25	91.9	7.0	1.1
Ordinary bread and cake, hand	257	20	3	85.8	12.5	1.7
Ordinary bread and cake, machine	2,191	11	.....	98.9	1.1	.....
Pie and pastry	127	.....	.....	100.0	.....	.....
Cracker and cookie	817	.....	.....	100.0	.....	.....
Hebrew baking	77	18	15	25.6	68.1	6.3
Other specialized baking [1]	98	.....	7	92.6	.....	7.4

[1] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.

Average Rates by City

In table 8 the average hourly rates for organized bakery workers in the 65 cities are grouped according to type of baking. In some cities (Buffalo, Seattle, and Spokane) it was impossible to separate the members in hand and machine shops for the purpose of computing averages, and the hand shops were therefore included with machine shops as the latter had the greater number of members.

The average for each city is weighted by the number of union members covered by the various rates. In using this table one should bear in mind the fact that it is possible for average rates to vary inversely with the degree of organization. If the union has organized all of the occupations and workers in a city, its average rate will probably be lower than if the skilled groups only are organized. However, the latter condition is disappearing, as the unions are organizing more of the unskilled workers each year.

Among the various branches of the industry, the city averages ranged from $0.415 per hour for pie and pastry shops in Pittsburgh

to $1.598 for Hebrew baking shops in Newark. In three of the six branches the range between the lowest and highest city averages was more than 100 percent.

In bread and cake hand shops the averages ranged from $0.526 in Birmingham to $1.190 in New York. Four cities had averages exceeding $1 per hour and three had averages below 60 cents.

In machine shops making ordinary bread and cake, the range was from $0.520 in Nashville to $1.227 in Seattle, with five cities averaging more than $1 per hour and five averaging less than 60 cents.

The highest city average for pie and pastry shops was 90 cents per hour in the Rock Island district. Only 14 cities reported union rates for these shops; half of these cities had averages exceeding and half had averages of less than 60 cents per hour.

In cracker and cookie shops the highest city average was $0.765 per hour in San Francisco and the lowest was $0.436 in Scranton. The average wage rate was under 60 cents per hour in 9 of the 24 cities in this group, and under 50 cents in 3 of the 9.

Hebrew baking shops had comparatively high averages in all cities where union agreements covered this type of work. There was a wide range in the averages, however, from $0.839 in Youngstown to $1.598 in Newark.

Union rates for other specialized bakeries were reported for 10 cities, 5 of which had average rates of more than $1 per hour and 5 had average rates of less than $1. The range was from $0.579 in Tampa to $1.095 in Detroit.

TABLE 8.—*Average Hourly Rates for Union Bakery Workers, by City and Type of Baking, July 1, 1943*

City and type of baking	Average hourly rate
Ordinary bread and cake, hand shops:	
New York, N. Y.	$1.190
Portland, Oreg.	1.076
San Francisco, Calif.	1.065
Los Angeles, Calif.	1.013
Average for all cities	.899
Chicago, Ill.	.988
Cincinnati, Ohio	.978
Rochester, N. Y.	.977
Springfield, Mass.	.945
Toledo, Ohio	.930
Newark, N. J.	.897
Phoenix, Ariz.	.897
South Bend, Ind.	.896
St. Louis, Mo.	.889
Cleveland, Ohio	.884
Madison, Wis.	.877
New Haven, Conn.	.864
Duluth, Minn.	.846
Butte, Mont.	.833
Denver, Colo.	.818
Peoria, Ill.	.807
St. Paul, Minn.	.784
Houston, Texas	.781
Youngstown, Ohio	.775
Des Moines, Iowa	.767
Pittsburgh, Pa.	.750
New Orleans, La.	.735
Manchester, N. H.	.729
Minneapolis, Minn.	.729
Salt Lake City, Utah	.722
Providence, R. I.	.719
Milwaukee, Wis.	.716
Boston, Mass.	.682
Dallas, Texas	.678
Ordinary bread and cake, hand shops—Con.	
Rock Island (Ill.) district [1]	$0.674
Scranton, Pa.	.619
Tampa, Fla.	.591
Indianapolis, Ind.	.555
Birmingham, Ala.	.526
Ordinary bread and cake, machine shops:	
Seattle, Wash.	[2] 1.227
Washington, D. C.	1.112
Spokane, Wash.	[2] 1.040
San Francisco, Calif.	1.024
Portland, Oreg.	1.022
Denver, Colo.	.985
Los Angeles, Calif.	.911
Butte, Mont.	.889
Madison, Wis.	.863
Phoenix, Ariz.	.854
Duluth, Minn.	.850
Kansas City, Mo.	.838
St. Louis, Mo.	.834
Houston, Tex.	.833
Youngstown, Ohio	.822
New York, N. Y.	.818
Newark, N. J.	.815
Oklahoma City, Okla.	.811
Buffalo, N. Y.	[2] .798
Cincinnati, Ohio	.798
Average for all cities	.798
Chicago, Ill.	.795
Detroit, Mich.	.793
South Bend, Ind.	.785
Rochester, N. Y.	.774
Philadelphia, Pa.	.773
Ordinary bread and cake, machine shops—Con.	
Pittsburgh, Pa.	$0.773
Wichita, Kans.	.772
Milwaukee, Wis.	.770
Rock Island (Ill.) district [1]	.770
Peoria, Ill.	.766
Salt Lake City, Utah	.764
Worcester, Mass.	.758
Reading, Pa.	.748
Columbus, Ohio	.742
Providence, R. I.	.741
Dayton, Ohio	.740
Cleveland, Ohio	.737
Des Moines, Iowa	.735
Louisville, Ky.	.734
Toledo, Ohio	.733
Indianapolis, Ind.	.725
Springfield, Mass.	.724
St. Paul, Minn.	.718
Minneapolis, Minn.	.710
New Orleans, La.	.709
Boston, Mass.	.708
New Haven, Conn.	.704
Omaha, Nebr.	.694
Grand Rapids, Mich.	.687
Dallas, Texas	.670
Binghamton, N. Y.	.665
Little Rock, Ark.	.656
Memphis, Tenn.	.654
Charlotte, N. C.	.646
Scranton, Pa.	.636
Baltimore, Md.	.626
Tampa, Fla.	.607
Atlanta, Ga.	.575

See footnotes at end of table.

TABLE 8.—*Average Hourly Rates for Union Bakery Workers, by City and Type of Baking, July 1, 1943*—Continued

City and type of baking	Average hourly rate
Ordinary bread and cake, machine shops—Con.	
Jacksonville, Fla.	$0.568
Birmingham, Ala.	.560
Richmond, Va.	.548
Nashville, Tenn.	.520
Pie and pastry:	
Rock Island (Ill.) district [1]	.900
New York, N. Y.	.843
Boston, Mass.	.776
Los Angeles, Calif.	.722
St. Paul, Minn.	.713
Average for all cities	*.655*
Detroit, Mich.	.636
Chicago, Ill.	.606
Cleveland, Ohio	.585
Philadelphia, Pa.	.584
Toledo, Ohio	.575
Buffalo, N. Y.	.574
Duluth, Minn.	.531
Baltimore, Md.	.458
Pittsburgh, Pa.	.415
Cracker and cookie:	
San Francisco, Calif.	.765
Duluth, Minn.	.751
New York, N. Y.	.749
Detroit, Mich.	.709
Dayton, Ohio	.704
Cracker and cookie—Con.	
Boston, Mass.	$0.693
Philadelphia, Pa.	.668
Average for all cities	*.656*
Kansas City, Mo.	.655
Chicago, Ill.	.647
Toledo, Ohio	.641
Spokane, Wash.	.630
Buffalo, N. Y.	.625
Los Angeles, Calif.	.619
Memphis, Tenn.	.611
Minneapolis, Minn.	.605
Portland, Oreg.	.599
Des Moines, Iowa	.598
Atlanta, Ga.	.586
Seattle, Wash.	.561
Denver, Colo.	.539
Nashville, Tenn.	.515
Birmingham, Ala.	.480
Wichita, Kans.	.457
Scranton, Pa.	.436
Hebrew baking:	
Newark, N. J.	1.598
Los Angeles, Calif.	1.522
New York, N. Y.	1.467
Average for all cities	*1.404*
Boston, Mass.	1.390
Chicago, Ill.	1.327
Hebrew baking—Con.	
Detroit, Mich.	$1.327
New Haven, Conn.	1.307
Rochester, N. Y.	1.291
Cleveland, Ohio	1.281
Philadelphia, Pa.	1.267
Worcester, Mass.	1.193
Baltimore, Md.	1.145
Pittsburgh, Pa.	1.129
Springfield, Mass.	1.099
Providence, R. I.	1.066
Denver, Colo.	.991
Milwaukee, Wis.	.922
St. Louis, Mo.	.921
Kansas City, Mo.	.886
Minneapolis, Minn.	.882
Youngstown, Ohio	.839
Other specialized baking: [3]	
Detroit, Mich.	1.086
San Francisco, Calif.	1.072
Chicago, Ill.	1.056
Buffalo, N. Y.	[4] 1.033
New York, N. Y.	1.013
Average for all cities	*.997*
Cleveland, Ohio	.917
Philadelphia, Pa.	.894
Los Angeles, Calif.	.776
Providence, R. I.	.766
Tampa, Fla.	.673

[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.
[2] Includes hand shops—not separable.
[3] French, Polish, Bohemian, Scandinavian, Spanish, Italian, etc.
[4] Includes Hebrew bakeries—not separable.

Changes in Railroad Wages, 1943-44[1]

Summary

THE wage disputes that originated in the demands of the railroad unions in 1942 extended over the whole of 1943 and final settlement was not arranged until January 1944. Fifteen cooperating railroad organizations, representing about 1 million nonoperating employees, served notices on the carriers in September 1942. The ensuing negotiations and the efforts of the National Mediation Board to adjust the dispute failed to bring about a settlement, and an Emergency Board was created on February 20. The Board, on May 24, recommended a general increase of 8 cents per hour.

The operating employees, comprising more than 300,000 train and engine and yard-service employees engaged in the actual movement of freight and passenger trains, initiated their movement for wage adjustments early in December 1942. This dispute also reached the stage of consideration by an Emergency Board. While this Board was holding hearings, the Office of Economic Stabilization, on June 22, issued an order disapproving the recommendation of the Board which had heard the case of the nonoperating employees. In view of this action, the Board for the operating employees stated that, although these employees had made out a strong case for substantial wage adjustments for removing gross inequities, it could recommend only an increase of 32 cents per basic day (4 cents per hour), permissible under the "Little Steel" formula. The recommendation of the Board was approved by the Office of Economic Stabilization but was protested by the unions.

The 15 unions representing the nonoperating employees obtained from the carriers, on August 7, an agreement embodying substantially the recommendations of the Emergency Board, but neither this nor any compromise acceptable to the unions was approved. Various unions ordered strike votes and also appealed to Congress on the ground that the Railway Labor Act had been disregarded. The Senate, on December 9, by vote of 74 to 4, declared in a joint resolution that Congress approved the recommendation of the Emergency Board in the nonoperating case as consistent with the Railway Labor Act and with the Stabilization Act of October 1942. On December 15, the Brotherhoods representing operating employees fixed December 30 as a strike date, and the unions of nonoperating employees later fixed the same strike date. Presidential intervention on December 19 resulted in an Executive order on December 27 for the taking over of the railroads by the Government. Soon thereafter, agreements were worked out whereby both operating and nonoperating employees obtained increases ranging from 9 to 11 cents per hour. Part of the increases were in lieu of claims for adjustments of overtime compensation. On January 18 the railroads were returned to the carriers.

[1] Prepared in the Bureau's Editorial and Research Division by Witt Bowden.

Wage Changes in 1937 and 1941

The unions claimed that railroad wages had lagged, and in support of this view pointed to the fact that wages in railroad employment had been modified only twice since 1936. The agreement of 1937 provided for an increase of 44 cents per basic day (5.5 cents per hour) for operating employees and an increase of 5 cents per hour for nonoperating employees. The mediation agreements of December 5 and 15, 1941, provided for an increase of 76 cents per basic day (9.5 cents per hour) for operating employees and an increase of 10 cents per hour for nonoperating employees. Thus, the aggregate increase for each group after 1936 was 15 cents per hour. Hourly earnings in railroad transportation in 1936 averaged about 65 cents. The increase of 15 cents per hour was therefore about 23 percent, whereas the increase of hourly earnings in manufacturing industries from 1936 to the end of 1941 was more than 40 percent. The general index of wages constructed by the Federal Reserve Bank of New York (which includes railroad wages and the wages and salaries of various groups with comparatively inelastic rates of compensation) increased more than 30 percent.

If January 1941 (the stabilization date under the "Little Steel" formula) is made the terminal date for a comparison of trends after 1936, this comparison is also unfavorable to railroad employees. The general average of hourly earnings of railroad workers rose about 9 percent between January 1936 and January 1941. The average hourly earnings of factory workers rose, during the same period, about 24 percent; and the general wage index of the Federal Reserve Bank of New York rose about 17 percent.

A basic assumption underlying the stabilization of wages at levels of January 1941, under the "Little Steel" formula, was the existence of an approximate wage equilibrium and of equitable relationships in the general wage structure toward the end of 1940 or early in 1941. The general validity of this assumption is attested by the exceptionally stable nature of the wage structure throughout the years 1938 to 1940. Representatives of the railroad workers argued, however, that generalizations of this nature are subject to exceptions which must be taken into account in an equitable administration of a national program. The railroad wage structure, it was held, was an exception to the rule that wage relationships were on an equitable basis either in January 1941 or at the time of the 1943 wage-adjustment proceedings. Attention was called to the distinctive and Nation-wide character of the railroad wage structure and the distinctive procedure for wage determinations, with long intervals between comprehensive adjustments, in contrast to the almost continuous or at least frequent and flexible adjustments by establishment and area in most other industries. These conditions, it was asserted, had created a presumption in favor of the view that a serious lag in railroad wages had occurred.

Dispute of Railroad Nonoperating Employees

The nonoperating employees, numbering about 1,000,000 and represented by 15 cooperating railroad labor organizations, made demands in September 1942 for an increase of 20 cents per hour in all wage rates, not less than 70 cents to be paid to any employee.

The demands included also a union shop. The nonoperating employees are engaged in such varied activities as the maintenance of railroad tracks and equipment, the handling of freight shipments in terminals, the selling of passenger tickets, and the performance of the various other duties not directly connected with the actual movement of freight and passenger trains. After negotiations between the parties and mediation proceedings under the Railway Labor Act had failed to end the dispute, an Emergency Board was named on February 20, 1943, composed of I. L. Sharfman (chairman), Walter T. Fisher, and John A. Fitch. This Board was appointed from the National Railway Labor Panel created by Executive Order No. 9172 of May 22, 1942.

The stabilization program adopted in October 1942 gave rise to questions regarding the authority of the National Railway Labor Panel as distinguished from that of the National War Labor Board. Executive Order No. 9299 of February 4, 1943, affirmed the jurisdiction of the National Railway Labor Panel, and the Emergency Board appointed on February 20 proceeded with the hearings under the specific authority of that order.

While the Emergency Board was holding hearings, the stabilization program was modified by an Executive order of April 8, 1943 (the "hold-the-line" order), which made no mention of wage adjustments to remedy gross inequities or to aid in the prosecution of the war. On May 12, 1943, a policy directive was issued to clarify the Executive order of April 8, and this directive returned to the express terms of the Stabilization Act of October 2, 1942, in permitting wage adjustments for remedying gross inequities and aiding in the effective prosecution of the war. It was primarily on this basis that the Emergency Board had proceeded in its analysis of the evidence, virtually all of which had been presented to the Board by April 8. The Board, in its report, called attention to the changes in stabilization policy while its proceedings were under way. It was recognized that questions had arisen as to the extent of the Board's discretion under the Executive order of April 8 and the policy directive of May 12, but the Board held that it had not only a legal right but a clear duty and responsibility to place before the President all the essential facts of the dispute and to submit to him the considered judgment of its members as to a fair and reasonable settlement.

The Board recommended, in connection with the wage controversy, a general increase of 8 cents per hour to all of the employees involved in the dispute. As for the demand for a union shop, the Board stated that the granting of this request would compel the carriers to act contrary to the Railway Labor Act, and for this and other reasons the request for a union-shop agreement was not approved.[2]

Dispute of Railroad Operating Employees

The operating employees, numbering in May 1943 about 315,000, comprise the train and engine and yard-service employees who, for the most part, are engaged in the actual movement of freight and passenger trains. The employees were represented by the Brother-

[2] Report to the President by the Emergency Board appointed February 20, 1943, pursuant to the Railway Labor Act and Executive Orders 9172 and 9299, May 24, 1943; Supplemental Report to the President by the Emergency Board appointed February 20, 1943, pursuant to the Railway Labor Act and Executive Orders 9172 and 9299, May 29, 1943. For a summary of the findings and recommendations of the Board, see Recommendation of Emergency Board in Dispute of Railroad Nonoperating Employees, Monthly Labor Review, July 1943, pp. 46-57.

hood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, the Order of Railway Conductors, the Brotherhood of Railroad Trainmen, and the Switchmen's Union of North America. Formal notices were served by the unions on January 25, 1943, requesting an increase of 30 percent in basic rates of pay, with a minimum increase of $3 per day. The major demand was for the increase of $3 per day because this demand, if granted, would have included most of the employees.

The customary negotiations and mediation proceedings failed to adjust the dispute and an Emergency Board was appointed.[3] Normally this would have been preceded under the Railway Labor Act by the taking of a strike vote and the fixing of a strike date, but these preliminaries were dispensed with under authority of Executive Order No. 9172, which also created a National Railway Labor Panel from which emergency boards were to be appointed. The Board for the general case of the operating employees was appointed on May 31, 1943, and was composed of Walter P. Stacy (chairman), I. L. Sharfman, and Frank M. Swacker.[4] The Board met on June 6 in New York City, where extensive hearings were held.

Disapproval of Findings of Board for Nonoperating Employees

While the Board which was appointed to hear the case of the operating employees was holding hearings in New York City, the wage recommendation of the Board appointed to hear the case of the nonoperating employees was disapproved by the Office of Economic Stabilization. It was stated by the Director of Economic Stabilization on June 22 that the recommendation of the Board for an increase of 8 cents per hour was disapproved because the recomendation was based on alleged gross inequities shown by a comparison of railway rates with the wages of other industries and that such a comparison was not relevant under the Executive order (the "hold-the-line" order) of April 8 or the policy directive of May 12. It was stated that the Board had not exhausted the possibilities of making adjustments under the Executive order of April 8. The "substandard" test was proposed by the Director, primary upward adjustments to be made for workers in the lower wage groups, with adjustments for other workers in immediately interrelated job classifications. On June 30, the Office of Economic Stabilization directed that the Emergency Board might reconsider the case with a view to making adjustments of this nature.

The Chairman of the Emergency Board stated, however, that the Board, upon completion of its investigation and the rendering of its report to the President, had ceased to exist, and that he was without authority to call it together again. The Chairman also held that the Director of Economic Stabilization was proposing to exercise a function which had been given exclusively to the Emergency Board, namely, that of molding the terms of settlement of the dispute as distinguished from passing upon the amount of the recommended increase. It was stated that the Emergency Board had already given prolonged consideration to the substandard test and to the procedure

[3] The history of the dispute and the proceedings of the Board are given in detail in Report to the President by the Emergency Board, appointed May 31, 1943, pursuant to the Railway Labor Act and Executive Orders 9172 and 9299, September 25, 1943.

[4] Boards other than the two general Boards mentioned in this article were appointed from time to time to hear special cases, as for example, the Board appointed February 20 to hear the case of firemen and enginemen regarding basic rates, particularly on diesel-electric locomotives.

for making adjustments in local wage-rate brackets and in immediately interrelated job classifications (a procedure being worked out by the National War Labor Board for making adjustments in wage structures differing radically from that of railroad transportation). The Emergency Board had found, it was stated, that these procedures as well as the substandard test were inapplicable to the railroad wage structure, and that there was no basis for changing the long-established wage relations within that structure or for modifying existing differentials.

The unions representing the nonoperating employees vigorously protested the action of the Director of Economic Stabilization. Representatives of the unions and the carriers, meeting on August 7, entered into an agreement, subject to official approval, in accord with the recommendations of the Emergency Board for a general increase of 8 cents. This action brought to an end the dispute between the parties, but there remained the disagreement between the unions and the Office of Economic Stabilization. The Director of that office held that a flat 8-cent adjustment on a Nation-wide basis for these groups of railroad employees would be viewed as a precedent and would make a dangerous breach in the stabilization wall. The unions, on the contrary, argued that the plan approved by the Emergency Board and accepted by the carriers was merely a taking up of part of the lag in railroad wages; that the railroad wage structure had been created with great care, long maintained, and at long intervals modified by national action on a Nation-wide basis; and that the proposal to substitute for the tested procedure of the Railway Labor Act the procedure being worked out at the time on an experimental basis by the National War Labor Board for wage adjustments in localized industry and war production would be disruptive of the well-established and harmonious wage relations within the railroad industry.

Wage Structure of Operating Employees

It had long been recognized that the wage structure of the operating employees was closely interrelated with that of the nonoperating employees. The trends of the wages of the two groups in recent years had been virtually the same. The Emergency Board was hearing the case of the operating employees when the Office of Economic Stabilization disapproved the wage increase recommended for the nonoperating employees, and was confronted with the problem of evaluating this disapproval in its relation to the dispute of the operating employees. The Board, nevertheless, proceeded with its hearings on the basis of the evidence and on September 25 issued its report containing its findings of fact.

The Board, in its analysis of the wage structure of the operating employees, pointed out the essential difference between the operating employees engaged in road service and those engaged in yard service. In May 1943, slightly more than 141,000, or about 45 percent, of the 315,000 operating employees were engaged in road freight service. About 44,000, or 14 percent, of the total were in passenger service. The remaining employees, about 130,000, or 41 percent, were engaged in yard service. These, as classified by the Interstate Commerce Commission, are yard brakemen and yard helpers (the largest group of operating employees), yard conductors and yard foremen, yard engineers and motormen, and yard firemen and helpers.

The wage structure of employees in road service differs essentially from that of employees in yard service. Road-service employees operate under the so-called dual basis of pay, involving both mileage and time. The wage structure also varies, for both road and yard service, on railroads in the three major regions—eastern, southeastern, and western—which have served, since the period of Federal administration in the first World War, as a rough basis for classifying the various railroads. The basic daily wage rates of the various groups of workers employed on railroads preponderantly in each of the three regions are given in tables 1 to 4.

TABLE 1.—*Basic Daily Wage Rates of Locomotive Engineers, Firemen, and Electric Helpers in Road Service, Effective December 1, 1941* [1]

Classification of locomotives (weight on drivers)	Basic daily wage rate									
	Eastern railroads			Western railroads				Southeastern railroads		
	Engineer	Fireman	Electric helper	Engineer	Fireman		Electric helper	Engineer	Fireman	Electric helper
					Coal	Oil				
	Passenger service									
Less than 80,000 pounds	$7.82	$6.10	$6.10	$7.76	$6.06	$6.06	$6.06	$7.76	$6.11	$6.11
80,000 to 100,000 pounds	7.82	6.19	6.10	7.76	6.14	6.06	6.06	7.76	6.19	6.11
100,000 to 140,000 pounds	7.91	6.27	6.10	7.85	6.22	6.06	6.06	7.85	6.27	6.11
140,000 to 170,000 pounds	7.99	6.45	6.10	7.93	6.38	6.22	6.06	7.93	6.43	6.11
170,000 to 200,000 pounds	8.08	6.53	6.10	8.02	6.46	6.30	6.06	8.02	6.51	6.11
200,000 to 250,000 pounds	8.17	6.62	6.27	8.10	6.54	6.38	6.22	8.10	6.59	6.27
250,000 to 300,000 pounds	8.25	6.62	6.27	8.19	6.54	6.38	6.22	8.19	6.59	6.27
300,000 to 350,000 pounds	8.34	6.70	6.27	8.27	6.62	6.46	6.22	8.27	6.67	6.27
350,000 to 400,000 pounds	8.42	6.79	6.27	8.36	6.70	6.54	6.22	8.36	6.75	6.27
400,000 to 450,000 pounds	8.51	6.88	6.45	8.44	6.78	6.62	6.38	8.44	6.83	6.43
450,000 to 500,000 pounds	8.60	6.96	6.45	8.53	6.86	6.70	6.38	8.53	6.91	6.43
500,000 pounds and over	8.68	7.05	6.45	8.61	6.94	6.78	6.38	8.61	6.99	6.43
Mallets, regardless of weight	8.90	7.39	.....	8.83	7.26	7.06	.....	8.83	7.31	.....
	Freight service (except local and way freight) [2]									
Less than 80,000 pounds	$8.55	$6.58	$6.58	$8.48	$6.55	$6.55	$6.55	$8.48	$6.60	$6.60
80,000 to 100,000 pounds	8.64	6.66	6.58	8.57	6.63	6.55	6.55	8.57	6.68	6.60
100,000 to 140,000 pounds	8.73	6.83	6.58	8.66	6.79	6.63	6.55	8.66	6.84	6.60
140,000 to 170,000 pounds	8.98	7.01	6.58	8.91	6.95	6.79	6.55	8.91	7.00	6.60
170,000 to 200,000 pounds	9.16	7.18	6.58	9.08	7.11	6.95	6.55	9.08	7.16	6.60
200,000 to 250,000 pounds	9.33	7.35	6.75	9.25	7.28	[3] 7.11	6.71	9.25	7.32	6.78
250,000 to 300,000 pounds	9.48	7.52	6.75	9.40	7.43	7.43	6.71	9.40	7.48	6.78
300,000 to 350,000 pounds	9.63	7.79	6.75	9.55	7.68	7.68	6.71	9.55	7.64	6.78
350,000 pounds and over	9.84	7.87	6.75	9.76	7.75	7.75	6.71	9.76	7.80	6.78
Mallets, less than 275,000 pounds	10.38	7.87	.....	10.30	7.75	7.75	.....	10.30	7.80	.....
Mallets, 275,000 pounds and over	10.62	8.20	.....	10.53	8.06	8.06	.....	10.53	8.11	.....

[1] Based on data in Report to the President by the Emergency Board, appointed May 31, 1943, pursuant to the Railway Labor Act and Executive Orders 9172 and 9299, pp. 13–14. The rates, which are based primarily on specified mileages rather than hours, are those which prevailed before the wage adjustments described in this article became effective. Schedules for engineers and firemen were modified in some measure as a result of the report of the Emergency Board in the so-called Diesel case (1943) and subsequent agreements by some of the parties.

[2] For local and way freight service, 52 cents per 100 miles or less to be added to the rates for engineers and 40 cents per 100 miles or less to be added to the rates for firemen.

[3] Oil differential not to apply on locomotives weighing over 215,000 pounds on drivers.

TABLE 2.—*Basic Daily Wage Rates of Locomotive Engineers, Firemen, and Electric Helpers in Yard Service, Effective December 1, 1941* [1]

Classification of locomotives (weight on drivers)	Basic daily wage rate								
	Eastern railroads			Western railroads			Southeastern railroads		
	Engineer	Fireman	Electric helper	Engineer	Fireman	Electric helper	Engineer	Fireman	Electric helper
Less than 140,000 pounds	$8.42	$6.88	$6.88	$8.36	$6.83	$6.83	$8.36	$6.83	$6.83
140,000 to 200,000 pounds	8.60	7.01	6.88	8.53	6.95	6.83	8.53	6.95	6.83
200,000 to 300,000 pounds	8.77	7.13	6.88	8.70	7.07	6.83	8.70	7.07	6.83
300,000 pounds and over	8.94	7.31	7.05	8.87	7.23	6.99	8.87	7.23	6.99
Mallets, less than 275,000 pounds	9.59	8.08	.....	9.51	7.95	.....	9.51	7.95	.....
Mallets, 275,000 pounds and over	9.84	8.34	.....	9.76	8.19	.....	9.76	8.19	.....

[1] For source, see table 1, footnote 1. Yard-service rates are time rates; the corresponding road-service rates (table 1) are based primarily on specified mileages.

The lowest of all of the basic daily wage rates received by operating employees under the wage agreement of December 1941 (tables 1–4) was the rate of $6.06 received by passenger firemen and electric helpers on small engines operating on western railroads (table 1). The largest basic daily rate was $10.62, which was received by freight engineers in the eastern region on Mallet locomotives with the greatest weight on drivers. The highest rates were paid on eastern railroads, but the regional differences were small. Some of the rates were somewhat higher on southeastern than on western railroads, but most of the rates were the same in these two regions. The rates for some of the groups were the same in the three regions.

TABLE 3.—*Basic Daily Wage Rates of Conductors and Trainmen, in Road Service, Effective December 1, 1941* [1]

Classification of employees	Basic daily wage rate		
	Eastern railroads	Western railroads	Southeastern railroads
Passenger service:			
Conductors	$8.40	$8.34	$8.40
Ticket collectors	7.11	7.06	7.11
Baggagemen	6.42	6.38	6.42
Baggagemen—mail and express	7.10	7.06	7.10
Baggagemen—mail or express	6.76	6.72	6.76
Brakemen	6.25	6.21	6.25
Freight service:			
Conductors—through	7.82	7.76	7.82
Conductors—local	8.38	8.31	8.38
Brakemen—through	6.40	6.35	6.40
Brakemen—local	6.83	6.78	6.83

[1] For source, see table 1, footnote 1.

The rates for conductors and other trainmen in road service (table 3) ranged from $8.40 per basic day for passenger conductors on eastern and southeastern railroads to $6.21 for passenger brakemen on western railroads. The basic daily rates of road conductors and trainmen, like those of road engineers and other enginemen in road service (table 1), do not measure the range of daily earnings, even on a straight-time basis, because of the fact that road-service employees are paid on the dual basis of time and mileage. Some employees in road service are able to accumulate in a calendar day mileage sufficient to earn more than the basic day's wage, although the responsibility of handling fast trains on the road for considerable periods of time calls for comparatively long intervening periods of rest.

TABLE 4.—*Basic Daily Wage Rates of Hostlers, Yard Foremen, Yard Helpers, and Switch Tenders, Effective December 1, 1941* [1]

Classification of employees	Basic daily wage rate		
	Eastern railroads	Western railroads	Southeastern railroads
Outside hostlers	$7.56	$7.47	$7.47
Inside hostlers	6.88	6.83	6.83
Hostlers' helpers	6.27	6.27	6.27
Yard conductors and yard foremen	8.34	8.34	8.34
Yard brakemen and yard helpers	7.82	7.82	7.82
Switch tenders	6.27	6.27	6.27

[1] For source, see table 1, footnote 1.

The basic daily wage rates of hostlers, yard conductors and yard foremen, yard brakemen and yard helpers, and switch tenders (table 4), and also the rates of engineers, firemen, and electric helpers in yard service (table 2), are time rates. The rates paid to hostlers and hostlers' helpers, who are engaged in the handling of locomotives other than in road service and yard switching service, ranged from $7.56 for outside hostlers on eastern railroads to $6.27 for hostlers' helpers throughout the country. The rate for switch tenders was the same throughout the country as for hostlers' helpers. The rate for yard foremen (designated in some areas as yard conductors) was $8.34 throughout the country. The rate for yard helpers (designated in some areas as yard brakemen) was $7.82 throughout the country. Overtime rates for the classes of employees engaged in yard service (tables 2 and 4) were, with certain exceptions, payable at time and one-half for work beyond 8 hours per day.

Dual Basis of Pay of Road-Service Employees

The Board, in its analysis of the railroad wage structure, noted that yard-service employees are ordinarily paid by the day for an 8-hour day, with time and one-half for hours beyond 8, and that road-service employees are paid by a somewhat complicated system of compensation involving both basic days and mileage. The basic daily rates are paid either for a specified number of miles or for a specified number of hours. The basic daily rate in freight service is paid for 100 miles or less or 8 hours or less, on the assumption of an average speed of 12.5 miles per hour—not actual speed on the road but speed in the sense of elapsed time between terminals. Engine-service employees on pas-

senger trains are paid the basic daily rate for 100 miles or less or 5 hours or less. Train-service employees on passenger trains are paid the basic daily rate for 150 miles or less or 7.5 hours or less. The assumed speed in terms of elapsed time is in both cases 20 miles per hour. Overtime compensation for road-service employees begins when the hours worked or miles run in a day exceed specified limits.

The carriers pointed out that if more than one basic day's wage is earned, under the mileage system, in one calendar day, any increase in the basic daily wage results in a larger increase per calendar day (or per hour). This process was described as "pyramiding" wage increases.

The employees, in the hearings before the Board, emphasized the mileage basis of compensation and described it as an incentive system. The time element is relevant, it was asserted, only in the computation of overtime pay. It was agreed that the speedier runs have significant advantages, but it was argued that the more desirable assignments afford a method of promoting employees on the basis of merit, responsibility, and seniority without increases in basic rates of pay. Any advantage accruing to employees from the increase in train speeds over a period of years was attributed to the working out of this system of incentive pay which, if it is to be effective, must place a premium on increases in productivity. Although train speeds increased after the adoption of the mileage system, war conditions reduced the speeds, and as a result, road-service employees often found it necessary to work additional hours without additional compensation because they could still make their trips within a basic day or the same number of basic days when measured in hours.

Changes in Hourly Earnings of Operating Employees

The carriers presented extensive data on weekly and annual earnings and described these averages as large in comparison with average earnings in other employments. Representatives of the employees disagreed with the carriers as to the methods of computing average earnings and also as to the view that railroad workers obtained comparatively high earnings. The Emergency Board, in evaluating this conflicting evidence, pointed out that railroad occupations, and particularly the occupations of the operating employees, have no counterparts in other industries. It was impossible for the Board to make comparisons of the wage levels of railroad engineers or brakemen or switchmen with the wages of comparable workers in other industries because other industries have no comparable workers. Thus, it was necessary for the Board to approach the problem of analyzing railroad wages from the point of view of comparative trends. A comparison of the trends of average weekly or annual earnings was found to be more unfavorable to railroad workers than a comparison of trends in rates and in hourly earnings.

Employers, however, do not ordinarily undertake to pay wage earners a specified annual wage or even a weekly wage. The amount earned during a year or a week depends not only on the wage rate but also on the regularity of employment, hours of work, and various other factors. Adjustments in wages, such as the Board was called upon to consider, are therefore adjustments in basic rates. In the case before the Board, however, the problem was complicated by the

dual basis of compensation, which gave rise to a sharp controversy over the trends of average hourly compensation as distinguished from the change in basic daily rates.

Basic pay schedules are set forth in terms of daily rates, but it was recognized by both parties that the basic daily rates of the various occupational groups cannot be adequately combined to show the trend of the composite daily rate. Both parties converted the daily rates to an hourly basis but used different methods.

The basic wage statistics pertaining to daily and hourly earnings are published by the Interstate Commerce Commission and are derived from monthly reports of the carriers to that agency. The Commission gives data separately for 128 groups of railroad employees, including each of the 22 principal groups involved in the dispute of the operating employees. The information given for the groups employed in train and engine service includes the straight-time hours worked, the straight-time hours paid for, the overtime hours paid for, the hours classified as constructive allowances, and total service hours. In adjacent columns of the Commission's reports are the amounts of compensation for these several categories of hours. Under the dual basis of pay, the number of hours included as straight-time hours "paid for" is greater than the number of straight-time hours "actually worked." The difference between the hours "paid for" and the hours "actually worked" or on duty has been described as the number of hours "paid for but not worked." This term is derived from the bookkeeping procedure used in translating the basic days into hours and the basic daily rates or mileage rates into hourly compensation. It is not to be inferred, however, that employees who are paid on a mileage basis receive compensation other than for work actually performed. The compensation for straight-time hours in excess of the number of straight-time hours on duty is in reality compensation for excess mileage run during straight-time hours, and it is primarily for this excess mileage and not for hours not worked that employees are paid.[5]

The employees contended that the hours sometimes described as "hours paid for but not worked" should be included, and the carriers contended that they should be excluded, when average hourly earnings are being computed. The differences in point of view and method are indicated by table 5.

The averages derived by the use of method A of table 5 are approximate measures of basic rates. They were described by the carriers as "hourly equivalents of the basic daily rates."

Methods B, C, and D take account of the effects on earnings of various factors other than basic straight-time rates. One of the factors is overtime. The averages for the road-passenger groups under method C are lower than those under method A, and the averages of method D are lower than those of method B, because the hourly overtime compensation which enters into the averages of C and D is lower for these groups than their straight-time compensation. Another factor is the variable proportion of straight-time hours credited to the employees when they complete their assignments in fewer hours than those specified for a basic day. Another variable factor independent of basic rates is the inclusion, in methods C and D, of compensation for hours classified as constructive allowances (compensable time away from home terminals, time when called but not used, etc.).

[5] Federal Coordinator of Transportation, A Survey of the Rules Governing the Wage Payments in Railway Train and Engine Service, volume I, p. S-2.

TABLE 5.—*Average Hourly Earnings of Train and Engine and Yard-Service Employees, October 1942* [1]

[Computed by methods used by carriers and by employees in exhibits presented to Emergency Board]

Classification of employees	Average hourly earnings, by use of—			
	Method A [3]	Method B [3]	Method C [4]	Method D [4]
Switch tenders	$0.797	$0.797	$0.802	$0.811
Outside hostlers	.939	.939	.971	.995
Inside hostlers	.859	.859	.871	.892
Outside hostlers' helpers	.784	.784	.812	.829
Road passenger conductors	1.115	1.792	1.111	1.702
Assistant road passenger conductors and ticket collectors	.936	1.486	.935	1.407
Road freight conductors (through freight)	.986	1.208	1.014	1.285
Road freight conductors (local and way freight)	1.048	1.141	1.138	1.218
Road passenger baggagemen	.881	1.394	.875	1.344
Road passenger brakemen and flagmen	.844	1.400	.841	1.323
Road freight brakemen and flagmen (through freight)	.812	1.065	.839	1.058
Road freight brakemen and flagmen (local and way freight)	.865	.939	.944	1.007
Yard conductors and yard foremen	1.050	1.091	1.076	1.118
Yard brakemen and yard helpers	.977	1.017	1.003	1.040
Road passenger engineers and motormen	1.561	2.254	1.494	2.084
Road freight engineers and motormen (through freight)	1.195	1.522	1.236	1.519
Road freight engineers and motormen (local and way freight)	1.217	1.310	1.325	1.404
Yard engineers and motormen	1.095	1.148	1.127	1.178
Road passenger firemen and helpers	1.282	1.885	1.233	1.735
Road freight firemen and helpers (through freight)	.941	1.201	.969	1.192
Road freight firemen and helpers (local and way freight)	.954	1.039	1.049	1.112
Yard firemen and helpers	.881	.919	.908	.942
Above classes of employees, combined	.993	1.172	1.019	1.187

[1] Source: Report to the President by the Emergency Board appointed May 31, 1943, pursuant to the Railway Labor Act and Executive Orders 9172 and 9299, September 25, 1943, p. 31.
[2] Compensation for straight-time hours actually worked divided by number of straight-time hours actually worked. Employees' Exhibit No. 1, p. 7.
[3] Total compensation for straight-time hours divided by number of straight-time hours actually worked. Carriers' Exhibit No. 6, p. 20.
[4] Total compensation divided by total number of hours paid for. Employees' Exhibit No. 1, p. 7.
[5] Total compensation divided by total number of hours on duty (straight-time hours actually worked plus overtime hours plus hours classified as constructive allowances). Carriers' Exhibit No. 6, p. 20.

If the average hourly compensation of the operating employees as a group is computed by the 4 methods, the percentages of change from January 1941 to June 1943 vary within narrow limits ranging from 8.0 percent, when method B is used, to 11.3 percent, when method C is used (table 6.) The differences have been larger over longer periods, mainly because the increases in train speeds up to 1939 were accompanied by larger proportions of hours paid for (when mileage days are converted to hours) in excess of hours on duty. The use of the several methods of computing the hourly compensation also gives different trends for the separate classes of employees because the several classes are affected in different degrees by changes in train speeds, overtime, and constructive allowances.

TABLE 6.—*Changes in Average Hourly Compensation of Transportation Employees' January 1941, October 1942, and March and June 1943* [1]

[Computed by methods used by carriers and by employees in exhibits presented to Emergency Board]

Method of calculation [2]	Average hourly earnings					
	January 1941	October 1942	March 1943	June 1943	Increase: January 1941 to June 1943	
					Amount	Percent
Method A	$0.899	$0.993	$0.993	$0.994	$0.095	10.6
Method B	1.094	1.172	1.169	1.182	.088	8.0
Method C	.918	1.019	1.028	1.022	.104	11.3
Method D	1.098	1.187	1.184	1.192	.094	8.6

[1] Source: Report to the President by the Emergency Board appointed May 31, 1943, pursuant to the Railway Labor Act and Executive Orders 9172 and 9299, September 25, 1943, p. 34.
[2] For methods of calculation, see footnotes 2 to 5, table 5.

Trends of Railroad and Nonrailroad Wages

The employees presented much evidence regarding the lag in railroad wages up to January 1941. The general wage-stabilization program, it was noted, made the sound assumption that from 1938 to the end of 1940 the national wage structure had undergone few significant changes and that wage relationships in January 1941 might be viewed as broadly equitable. The testimony of the employees was designed, however, to show that the railroad wage structure was an exception, explainable by the lag in railroad wages between wage plateaus or periods of wage equilibrium, particularly between 1936 and 1940. The Emergency Board, although recognizing a lag in 1940, nevertheless emphasized, in accord with national wage policy, the comparative trends after January 1941.

TABLE 7.—*Changes in Straight-Time Hourly Earnings of Railroad Operating Employees and of Manufacturing Employees, January 1941 to June 1943*

Period	Average straight-time hourly earnings			
	Amount		Percent of change from January 1941	
	Railroad operating employees [1]	Manufacturing employees [2]	Railroad operating employees [1]	Manufacturing employees [2]
January 1941	$0.899	$0.664		
May 1942	.991	.788	10.2	18.7
June 1943	.994	.893	10.6	34.5

[1] Straight-time earnings as computed by Method A, described in footnote 2, table 5.
[2] The figures of straight-time hourly earnings in manufacturing are affected by interindustry shifts in employment. An estimate designed to eliminate the effects of these shifts gives an increase from January 1941 to June 1943 of 18.2 cents or 27.4 percent.

The straight-time hourly compensation (the hourly equivalent of the basic daily rate) of the operating employees as a group rose 10.2 percent between January 1941 and May 1942, and 10.6 percent between January 1941 and June 1943 (table 7). The average straight-time hourly earnings of all factory workers combined rose 18.7 percent between January 1941 and May 1942, and 34.5 percent between January 1941 and June 1943. An estimate of factory wages designed to eliminate the effects of interindustry shifts in employment indicates a rise of 27.4 percent, instead of 34.5 percent, in straight-time hourly earnings between January 1941 and June 1943.

Similar in its significance was the testimony regarding the changes in the wages of skilled groups, as in the iron and steel industries. The evidence relating to nonmanufacturing wages indicated that even in fields with comparatively inelastic wages the increases with few exceptions had exceeded the rise in railroad wages after 1936, after 1939, and after January 1941.

Labor Productivity, Manpower, and Other Factors Affecting Wages

Both the employees and the carriers presented extensive data in addition to the data on wages for consideration by the Emergency Board as supporting or opposing the demands for an increase in wages.

Evidence regarding increases in the average amount of transportation service per employee, per hour, and per dollar of wages was presented by the employees. Various witnesses, including men in service on the railroads, also emphasized the added work and burden of responsibility incident to wartime traffic, manpower shortages, and difficult operating conditions. The carriers argued that over a period of years the work of their employees had become less arduous and their duties and responsibilities less exacting. They also emphasized the role of capital investment in bringing about an increase in productivity.

The Emergency Board, in its evaluation of the evidence, recognized that technological improvements, with a continuing effect in raising man-hour output and reducing unit labor cost, form one of the primary bases of wage increases. Fluctuations in man-hour output, however, especially during short periods of time, may be brought about by nontechnological factors, and notably by changes in the volume of railroad traffic. It was stated that although long-run increases in labor productivity are of primary importance as a basis of wage increases, a particular wage adjustment is necessarily determined by a variety of factors differing from those that cause the highly variable changes in labor productivity.

The employees also presented extensive evidence designed to show exceptional railroad prosperity. The net income of class I railroads, it was pointed out, amounted to about $959,000,000 in 1942, an increase of 92 percent over 1941. The net-income figure for 1942, it was stated, was 5 times as large as in 1940, and more than 10 times as large as in 1939, and continued increases were shown for 1943. The carriers emphasized the temporary nature of wartime railroad traffic and earnings and the need for savings to aid the carriers in maintaining their competitive position after the war, in handling deferred maintenance work, and in making needed additions and betterments. The Emergency Board held that ability to pay is not a primary consideration but that neither the present financial condition nor the possible future needs of the industry should be made the basis of denying a wage increase that might be justifiable on other grounds.

Other supplementary considerations advanced by the employees in support of their demands included the argument that the maintenance of a stable and efficient labor force on the railroads was critically essential to the effective prosecution of the war and that the grave lag in railroad wages had created manpower difficulties which could be adequately and justly met only by measures to reduce the disparity between railroad wages and wages in other employments. The Board agreed that the unions had presented convincing evidence that the wages of the men they represented were as a rule comparatively low. It was agreed also that there were grave and widespread shortages of railroad manpower. The manpower problem, however, according to the Board, involves many complexities, and calls for a variety of approaches. Railroad labor shortages, it was noted, are relative shortages, the urgency of meeting them depending on labor needs in other essential industries and the availability of workers less vitally needed in other employments. The detailed information required for a proper consideration of the various phases of the manpower problem was declared to be beyond the possible scope of the Board's inquiry.

Recommendations of Board for Operating Employees

The Emergency Board, in its report of September 25, 1943, after presenting in detail its findings of fact, stated in its conclusion that on the basis of the entire record the employees involved in the dispute had made out a strong case for a wage increase to correct gross inequities and to aid in the effective prosecution of the war. It was pointed out, however, that the order of the Economic Stabilization Director of June 22 and his memorandum opinion of June 30 in the nonoperating case had disapproved wage adjustments for the nonoperating employees which had been recommended for those employees on substantially the same grounds. The Board stated, therefore, that it was compelled to conclude that no increase could be granted to the operating employees except such an increase as might be justified under the "Little Steel" formula. It was found that the basic straight-time hourly earnings of these employees in January 1941 averaged 89.9 cents, and that they had received an increase of approximately 10.5 percent. They were therefore entitled, under the "Little Steel" formula, to an additional increase of 4 cents per hour, or 32 cents per minimum basic day, to give effect to the full 15-percent increase permissible under the formula. This increase was therefore recommended, to become effective as of April 1, 1943.

The recommendation of the Emergency Board was approved by the Office of Economic Stabilization on October 16. The unions, however, had already protested against the recommendation.

Further Efforts to Adjust Wages of Nonoperating Employees

The Office of Economic Stabilization made a further effort to adjust the wages of the nonoperating employees by means of a Special Board appointed October 16. The unions in the meantime, on August 7, had entered into an agreement with the carriers for putting into effect, subject to official approval, substantially the terms of the recommendation made by the Emergency Board on May 24. The unions held that the Special Board had no authority under the Railway Labor Act because that act, it was held, applied to disputes between the parties, and the parties had reached an agreement on August 7. The Special Board nevertheless held hearings at which the parties appeared, and on November 4 made a recommendation. This recommendation was in conformity with the advice of the Director of Economic Stabilization in his order of June 22 and his memorandum opinion of June 30 to the members of the original Emergency Board. The Director, as already stated, proposed graduated adjustments to correct substandards and the making of further adjustments in immediately interrelated job classifications for the purpose of maintaining existing differentials. The Special Board recommended wage adjustments of 10 cents per hour for all employees with wages below 47 cents per hour and progressively smaller increases down to 4 cents for all employees receiving 97 cents or more per hour. These recommendations were approved on November 8 by the Office of Economic Stabilization.

The increase for operating employees as recommended by the Emergency Board in that case was limited, it will be recalled, to 32 cents per basic day (4 cents per hour). The Office of Economic Stabilization, in the opinion approving the recommendation for graduated increases ranging from 4 cents to 10 cents for the nonoperating em-

ployees, stated that proposals for a similar graduated adjustment for the operating employees would be approved. Thus, under this arrangement, all operating as well as nonoperating employees receiving 97 cents or more per hour would be limited to an increase of 4 cents per hour, but the operating as well as nonoperating employees receiving rates ranging from 90 cents to less than 97 cents per hour would be entitled to an increase of 5 cents per hour, and so on for the several gradations of wages. Neither the representatives of the nonoperating employees nor those of the operating employees were willing to accept this arrangement. Congress was requested to make a specific interpretation of the stabilization program in application to railroad wages. A joint resolution declaring that Congress approved the recommendation of the Emergency Board in the nonoperating case and asserting that the recommendation of this Board was in accord with the Railway Labor Act and the stabilization program was adopted by the Senate on December 9 by a vote of 74 to 4.

Strike Proposals and Intervention by the President

The Railway Labor Act specifies the procedure to be followed in the adjustment of railroad labor disputes. This procedure includes negotiations between the parties and intervention by the National Mediation Board and, if the procedure fails, the act specifies that a strike vote is to be taken and a strike date fixed preliminary to the appointment of an Emergency Board. Executive Order No. 9172 of May 22, 1942, provided, as already stated, for the appointment of Emergency Boards without the preliminaries of taking strike votes and fixing strike dates. The unions held, however, that the situation created by what they interpreted as an interference with the procedure prescribed by the Railway Labor Act warranted them in returning to the procedure of that act. The various unions therefore took strike votes, and on December 15 the five brotherhoods of operating employees announced December 30 as a strike date, the unions of nonoperating employees later fixing the same date.

The situation created by the strike votes and the fixing of a strike date led the Mediation Board to invoke the statutory procedure and to call the parties together for mediation proceedings. Before this action was carried out, however, the President, on December 19, intervened and offered his services as arbitrator. The Brotherhood of Locomotive Engineers and the Brotherhood of Railroad Trainmen accepted the offer, and the 15 unions representing the nonoperating employees on December 27 also agreed to arbitration but proposed that the recommendation of the Special Board approved on November 8 by the Office of Economic Stabilization be accepted by both parties and that the arbitration be limited to wage adjustments for overtime compensation. Three of the unions (Firemen and Enginemen, Railway Conductors, and Switchmen) had not accepted the offer of arbitration up to December 27, and the President, on that date, ordered the Secretary of War to take over the railroads.

Terms of Settlement

On December 27, the date of the taking over of the railroads by the War Department, an award was made by the President, as arbitrator, and embodied in an agreement in the cases involving the carriers and

the two Brotherhoods (the Locomotive Engineers and the Railroad Trainmen) which had declared their willingness to have the issues determined by the President. It was stated by the President in his award that the unions had asked for additional increases in wages based upon claims not presented to the Emergency Board or considered by that Board. These claims, it was stated, had reference to the adjustment of compensation for overtime, allowances for away-from-home expenses, and vacation pay. The President further stated that after consideration of these claims he had determined that 5 cents per hour, effective immediately, should be paid "as the equivalent of or in lieu of claims for time-and-half pay for time over 40 hours and for expenses while away from home." He also awarded a vacation of 1 week per year with pay. The award also stated that "the increases in pay above recited shall be paid until proclamation by the President or Declaration by the Congress of the cessation of hostilities."

The three organizations (the Locomotive Firemen and Enginemen, the Railway Conductors, and the Switchmen's Union) which had not immediately agreed to accept the President's offer of arbitration raised a question as to whether or not this award had "frozen" wages for the duration of the war. On December 31, a clarification of the award stated that the fixing of the increases for the period of the war was limited to the two items in the award, namely, the 5 cents per hour allowed in lieu of overtime and away-from-home expenses and the granting of a week's vacation with pay. On January 14, an agreement was concluded between the carriers and the three other Brotherhoods similar in its wage terms to the agreement involving the Locomotive Engineers and the Railroad Trainmen.

In addition to the wage terms, the agreement of January 14 between the carriers and the Brotherhoods contained a specific reservation of the right to reopen the question of changes in basic wage rates. It also contained a significant clause providing for future action on disputes in accord with the procedures of the Railway Labor Act.

The problem of the scope of arbitration affecting the nonoperating employees continued to cause disagreement, and on January 4 the President reconvened the Special Board which, on November 4, had recommended a graduated scale of increases. While this Board was in session, an agreement was reached between the parties on January 17 and approved by the Office of Economic Stabilization, and the services of the Special Board were therefore no longer required. The railroads were returned to the carriers on January 18. This new agreement between the carriers and the nonoperating employees canceled the agreement of August 7, adopted the graduated wage increases which had been recommended by the Special Board on November 4, and supplemented the graduated scale by providing compensation in lieu of overtime pay.

The graduated scale provided for an increase of 10 cents per hour for employees receiving less than 47 cents, 9 cents per hour for employees receiving 47 cents and less than 57 cents, and 8 cents per hour for employees receiving 57 cents and less than 70 cents. The new agreement provided for compensation of 1 cent per hour in lieu of overtime pay for each of these three groups, their total increases thus ranging from 9 cents to 11 cents per hour. The increases for the other groups under the graduated scale were 7 cents per hour for

employees receiving 70 cents and less than 80 cents, 6 cents per hour for those receiving 80 cents and less than 90 cents, 5 cents for those receiving 90 cents and less than 97 cents, and 4 cents for those receiving 97 cents and over. The new agreement provided for compensation in lieu of overtime pay for these four groups, ranging from 2 cents to 5 cents per hour, so that all of these employees received an aggregate increase of 9 cents per hour. Thus, the total increases for all nonoperating employees ranged from 9 cents to 11 cents per hour, the combined increases of more than 9 cents per hour being limited to employees receiving less than 57 cents per hour. Nonoperating employees, unlike the operating groups, had already obtained concessions from the carriers for paid vacations.

Trend of Factory Earnings, 1939 to December 1943

THE published average earnings of factory workers are summarized in the accompanying table for selected months from January 1939 to December 1943.[1] The earnings shown in this table are on a gross basis (i. e., before deductions for social security, income and victory taxes, bond purchases, etc.).

Weekly earnings in all manufacturing averaged $44.68 in December 1943—92.7 percent above the average in January 1939, 67.7 percent above January 1941, and 14.9 percent above October 1942. Such factors as longer hours of work, merit increases for individual workers, premium pay for overtime worked, changing composition of the labor force within plants, shifts in the distribution of workers among plants and among industries, as well as wage-rate increases, account for the rise in earnings.

Gross hourly earnings in all manufacturing averaged 99.5 cents in December 1943—57.4 percent above the average in January 1939, 45.7 percent above January 1941, and 11.4 percent above October 1942.

Straight-time average hourly earnings, as shown in columns 7 to 9, are estimated to exclude premium pay at time and a half for work in excess of 40 hours. The effect of extra pay for work on supplementary shifts and on holidays is included. For all manufacturing, the straight-time average in December 1943 was 92.7 cents per hour; this was 48.8 percent higher than in January 1939, 39.6 percent above January 1941, and 10.5 percent above October 1942.

The shift of workers from relatively low-wage to relatively high-wage industries since 1939 would have raised the average earnings of factory workers, even if no other influences had been present. The effects of such interindustry shifts have been eliminated from the averages shown in columns 10 to 12 of the table. If employment had been distributed between industries as it was in January 1939, the straight-time hourly earnings of factory workers would have averaged 84.5 cents in December 1943, or 35.6 percent above the corresponding average in January 1939, 30.4 percent above January 1941, and 8.1 percent above October 1942. Between November and December 1943 the rise in straight-time hourly earnings, after eliminating the in-

[1] Compare "Trends in Factory Wages 1939-43," Monthly Labor Review, November 1943, pp. 869-884, especially table 4, p. 879. For detailed data regarding weekly earnings see Detailed Reports for Industrial and Business Employment, December 1943, table 6, p. 683, of this issue.

fluence of shifting employment, amounted to six-tenths of 1 percent. Even this latter series of averages exaggerates the rise in wage rates, because it includes the influence of interplant shifts of employment, merit increases for individual workers, and premium rates for work on extra shifts and on holidays.

Earnings of Factory Workers, Selected Months, 1939 to December 1943

Month and year	Average weekly earnings			Average hourly earnings			Estimated straight-time average hourly earnings [1]			Estimated straight-time average hourly earnings weighted by January 1939 employment [2]		
	All manufacturing (1)	Durable goods (2)	Nondurable goods (3)	All manufacturing (4)	Durable goods (5)	Nondurable goods (6)	All manufacturing (7)	Durable goods (8)	Nondurable goods (9)	All manufacturing (10)	Durable goods (11)	Nondurable goods (12)
1939: Jan.	$23.19	$25.33	$21.57	$0.632	$0.696	$0.583	$0.623	$0.688	$0.574	$0.623	$0.688	$0.574
1940: Jan.	24.56	27.39	22.01	.655	.717	.598	.644	.703	.589	.635	.697	.580
1941: Jan.	26.64	30.48	22.75	.683	.749	.610	.664	.722	.601	.648	.711	.590
July	29.62	33.90	25.16	.735	.815	.645	.708	.780	.630	.689	.771	.626
1942: Jan.	33.40	38.98	26.97	.801	.890	.688	.762	.835	.670	.729	.810	.667
July	36.43	42.51	28.94	.856	.949	.725	.809	.885	.701	.759	.846	.694
Oct.	38.89	45.31	30.66	.893	.990	.751	.839	.919	.723	.782	.869	.716
1943: Jan.	40.62	46.68	32.10	.919	1.017	.768	.859	.941	.733	.794	.886	.726
Apr.	42.48	48.67	33.58	.944	1.040	.790	.878	.957	.751	.808	.897	.741
July	42.76	48.76	34.01	.953	1.050	.806	.899	.981	.766	.823	.919	.760
Aug.	43.52	49.61	34.55	.965	1.060	.811	.897	.976	.769	.822	.911	.758
Sept.[3]	44.39	51.01	34.73	.993	1.097	.823	.925	1.012	.783	.843	.942	.767
Oct.	44.86	51.26	35.18	.988	1.086	.824	.916	.997	.781	.836	.929	.766
Nov.[4]	45.32	51.67	35.73	.996	1.097	.829	.923	1.007	.783	.840	.935	.768
Dec.[4]	44.68	50.50	35.61	.995	1.093	.832	.927	1.010	.788	.845	.942	.772

[1] Average hourly earnings, excluding the effect of premium pay for overtime.
[2] Average hourly earnings, excluding premium pay for overtime, weighted by man-hours of employment in the major divisions of the manufacturing industry for January 1939.
[3] Because of the influence of premium pay for work done on Labor Day, the September figures are not strictly comparable with those shown for other months.
[4] Preliminary.

Portal-to-Portal Travel Time in Mines

THE President's committee on travel time in bituminous-coal mines made a preliminary report on February 3, 1944.[1] The report was based upon questionnaire returns covering 141,000 underground workers, members of the United Mine Workers of America, who were producing approximately 63 percent of the underground-mined bituminous coal. The committee stated that when the replies were tabulated they showed a national weighted-average daily travel time of 55.29 minutes, but data received after this tabulation had been made indicated that the final figure would be somewhat higher. For individuals, travel time ranged from less than 5 minutes to 3 hours and 3 minutes. The weighted average given in the report was 59.17 minutes for the Northern Appalachian Area and 52.78 minutes for the Southern Appalachian Area.

The eight largest producing districts have a total output of approximately 85 percent of the coal produced at underground mines by workers affiliated with the United Mine Workers. The accompanying statement shows for each of these districts the percent of total output that it produces and the average weighted travel time.

[1] Press release of February 3, 1944.

	Percent of total output covered by sample	Average travel time (in minutes)
Bituminous Coal Act districts:		
Southern No. 2	85. 18	52. 18
Ohio	77. 00	56. 62
Western Pennsylvania	70. 67	61. 24
Northern West Virginia	62. 83	55. 79
Alabama	59. 40	57. 27
Southern No. 1	58. 75	54. 07
Eastern Pennsylvania	45. 26	55. 07
Illinois	3. 63	48. 96

Employment and Pay Rolls in La Paz, Bolivia, 1942[1]

THE total number of industrial employees in and near the city of La Paz, Bolivia, for 1942, averaged 7,133. Of the wage earners, 6,176 persons were nationals and 221 persons were aliens; and of the salaried employees, 588 persons were nationals and 148 persons were aliens. Total pay rolls for 1942 for the industries reporting amounted to 68,930,160 bolivianos.[2] As most of Bolivia's nonextractive manufacturing industry is in this area, the above figures present a fair picture of industrial activity throughout the Republic. Sales of domestic goods and services throughout Bolivia amounted to 707,980,409 bolivianos, and La Paz accounted for 566,384,327 bolivianos, or 80 percent of this.

The following table shows for each of the 13 manufacturing industries reporting for the region in and around La Paz for 1942, the percentage of total industrial production, average employment and total pay rolls, and the number of employees classified as salaried or wage-earning and as national or alien, with the amount of pay roll for each class.

Average Employment, and Total Pay Rolls in Manufacturing Industries in and Around La Paz, Bolivia, in 1942

Industry	Percent of total production	Totals	Salaried employees				Wage earners			
			Nationals		Aliens		Nationals		Aliens	
			Number	Salaries	Number	Salaries	Number	Wages	Number	Wages
				Bolivianos		*Bolivianos*		*Bolivianos*		*Bolivianos*
13 industries	100. 0	7, 133	588	13, 503, 696	148	7, 249, 925	6, 176	43, 012, 198	221	5, 164, 341
Textiles and clothing	26. 6	2, 596	68	1, 981, 550	38	1, 719, 280	2, 415	18, 027, 001	75	1, 918, 252
Beverages	20. 0	998	89	2, 065, 072	35	1, 553, 836	827	4, 798, 581	47	557, 445
Food products	16. 6	468	48	932, 361	11	529, 577	398	2, 640, 070	11	182, 541
Electricity	10. 0	660	182	3, 985, 274	19	1, 302, 714	443	4, 482, 498	16	261, 168
Tobacco	8. 4	154	16	439, 890	2	122, 592	136	626, 457	------	------
Building materials	4. 4	471	32	893, 857	5	468, 832	434	2, 015, 864	------	------
Chemicals and pharmaceuticals	3. 8	146	54	691, 128	11	277, 456	79	497, 684	2	93, 955
Printing	3. 4	316	36	864, 594	9	421, 748	268	3, 510, 137	3	113, 231
Leather and fur products	2. 9	359	32	882, 868	3	111, 560	305	2, 200, 416	19	177, 830
Glass and ceramics	2. 0	663	12	341, 044	6	303, 410	601	2, 476, 765	44	1, 747, 859
Paper products	1. 0	148	8	276, 550	3	265, 065	136	526, 596	1	3, 854
Metallurgical products	1. 0	68	5	72, 935	2	33, 605	61	502, 835	------	------
Lumber and furniture	. 4	86	6	76, 575	4	140, 250	73	698, 294	3	108, 206

[1] Data are from report of Jay Dixon Edwards, of the United States Embassy at La Paz.
[2] Average official exchange rate of boliviano in 1942=2.15 cents.

Four industry groups accounted for a total of 69 percent of all industrial employment; these were textiles and clothing (36.4 percent), beverages (14.0 percent), glass and ceramics (9.3 percent), and electricity (9.3 percent). The electrical industry accounted for 31.0 percent of all national salaried employees; and textiles and clothing (25.7 percent) and beverages (23.6 percent) accounted for 49.3 percent of all alien salaried employees. As to wage earners, textiles and clothing accounted for 39.1 percent of all national and for 33.9 percent of all alien wage earners.

For all workers combined, the average annual earnings in 1942 amounted to 9,663 bolivianos. For salaried employees the annual average for nationals was 22,965 bolivianos, whereas for aliens it was 48,986 bolivianos, or more than twice as much. For wage earners, the average annual pay of nationals was 6,964 bolivianos; that of aliens was 23,368 bolivianos, or more than three times as great. Of the total pay rolls, 62.4 percent was paid to national wage earners, 19.6 percent to national salaried employees, 10.5 percent to alien salaried employees, and 7.5 percent to alien wage earners.

In terms of total pay rolls, the most important industries were textiles and clothing (34.3 percent), electricity (14.6 percent), printing (7.1 percent), and glass and ceramics (7.1 percent). These four industry groups accounted for 63.1 percent of the total pay roll in manufacturing in and around the city of La Paz.

Cost of Living and Retail Prices

Cost of Living in Large Cities, January 1944

LIVING costs of city families declined 0.2 percent between mid-December and mid-January. Retail costs of foods dropped 0.7 percent, and clearance sales of heavy winter apparel caused a slight decrease in clothing costs during the month. Services continued to advance in price.

The typical family budget still cost 2.8 percent more than in January 1942, and 23.1 percent more than in January 1941. Since the beginning of the war in 1939 living costs have gone up 25.9 percent, compared to the 64.6-percent rise during a similar period in World War I.

The usual seasonal decreases in retail egg prices were mainly responsible for the 0.7-percent drop in total food costs during the month. Smaller reductions in the prices of pork and fish, coffee, shortening, and sugar and sweets also contributed to the lowering of food costs as a group. Sweetpotato prices, which increased less than usual between December 15 and mid-January, were stabilized on December 22 by the OPA. Vegetables rose in price—green beans rose 43 percent, nearly twice the usual seasonal rise, and higher prices were reported for spinach, cabbage, onions, Irish potatoes, and carrots.

Retail clothing prices declined 0.1 percent in the month ending on January 15, largely as a result of end-of-season clearance sales of men's overcoats, topcoats, and wool suits, and of women's coats. Scattered increases were reported for men's work clothing, which was generally scarce; also for cotton and rayon dresses and girdles in some cities, as a result of substitutions of higher-priced lines.

Scattered increases in coal prices were largely responsible for the 0.1-percent rise over the month in average costs of fuel, electricity, and ice.

Costs of housefurnishings purchased by moderate-income families increased 0.2 percent on the average, mainly because of substitutions of higher-priced lines in the case of wool rugs and bedroom suites. The usual January decreases in prices of bed sheets were lacking, as a result of the general cooperation with the WPB request to eliminate January "white sales." Merchants were extending their clearance sales of war-model living-room suites in anticipation of the lifting of Government restrictions on the production of furniture with steel springs, following a WPB action of January 14.

Costs of services continued to advance in January. Motion-picture admissions, charges for barber and beauty-shop services, shoe repairs, auto repairs, medical services, nursing care, and hospital care continued to increase and were especially significant in Kansas City and Seattle. Increases in laundry prices were reported from a number of cities where OPA had permitted laundries to adjust rates.

TABLE 1.—*Indexes of Cost of Living in Large Cities, January 15, 1944, and Earlier Dates*

Date	Indexes [1] (1935–39=100) of cost of—						
	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous goods and services
1939: August 15	98.6	93.5	100.3	104.3	97.5	100.6	100.6
1941: January 15	100.8	97.8	100.7	105.0	100.8	100.1	101.9
1942: May 15	116.0	121.6	126.2	109.9	104.9	122.2	110.9
September 15	117.8	126.6	125.8	108.0	106.2	123.6	111.4
1943: January 15	120.7	133.0	126.0	108.0	107.3	123.8	113.2
December 15	124.4	137.1	134.6	108.1	[3] 109.4	127.9	116.1
1944: January 15	124.1	136.1	134.5	(2)	109.5	128.1	116.2

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers in large cities.
[2] Revised. [3] Rents surveyed at quarterly dates: Mar. 15, June 15, Sept. 15, and Dec. 15.

TABLE 2.—*Percent of Change in Cost of Living in Large Cities in Specified Periods*

Period	Percent of change [1] in cost of—						
	All items	Food	Clothing	Rent [2]	Fuel, electricity, and ice	House-furnishings	Miscellaneous goods and services
Dec. 15, 1943, to Jan. 15, 1944	−0.2	−0.7	−0.1	(2)	+0.1	+0.2	+0.2
Jan. 15, 1943, to Jan. 15, 1944	+2.8	+2.3	+6.7	+0.1	+2.1	+3.5	+4.5
Sept. 15, 1942, to Jan. 15, 1944	+5.3	+7.5	+6.9	+.1	+3.1	+3.6	+4.2
May 15, 1942, to Jan. 15, 1944	+7.0	+11.9	+6.6	−1.6	+4.4	+4.8	+6.7
Jan. 15, 1941, to Jan. 15, 1944	+23.1	+39.2	+33.6	+3.0	+8.6	+[3]8.0	+16.1
Aug. 15, 1939, to Jan. 15, 1944	+25.9	+45.6	+34.1	+3.6	+12.3	+27.3	+17.8

[1] Based on changes in the cost of goods purchased by wage earners and lower-salaried workers.
[2] Changes through Dec. 15, 1943.
[3] Rents surveyed at quarterly dates: Mar. 15, June 15, Sept. 15, Dec. 15.

TABLE 3.—*Percent of Change [1] in Cost of Living in Large Cities in Specified Periods, by Cities*

City	Jan. 15, 1943, to Jan. 15, 1944	Aug. 15, 1939, to Jan. 15, 1944	Jan. 1, 1941, to Jan. 15, 1944	May 15, 1942, to Jan. 15, 1944	Sept. 15, 1942, to Jan. 15, 1944
Average: Large cities	+2.8	+25.9	+23.1	+7.0	+5.3
New England: Boston	+1.9	+24.7	+22.2	+6.8	+4.7
Middle Atlantic:					
Buffalo	+.4	+27.1	+22.9	+3.9	+3.0
New York	+4.1	+26.0	+23.5	+10.1	+7.2
Philadelphia	+2.8	+26.1	+24.3	+7.5	+5.5
Pittsburgh	+3.0	+26.3	+22.8	+7.3	+5.6
East North Central:					
Chicago	+2.4	+24.3	+21.2	+5.3	+4.6
Cincinnati	+3.3	+27.3	+24.4	+6.9	+5.6
Cleveland	+3.7	+27.6	+25.1	+7.4	+6.7
Detroit	+3.2	+26.8	+23.7	+5.1	+4.5
West North Central:					
Kansas City	+3.4	+23.5	+23.8	+6.7	+4.2
Minneapolis	+1.4	+21.1	+18.6	+4.1	+2.3
St. Louis	+3.0	+25.3	+21.7	+6.3	+4.4
South Atlantic:					
Baltimore	+2.8	+27.7	+25.1	+6.6	+5.2
Savannah	+5.6	+33.2	+30.5	+9.4	+8.4
Washington, D. C.	+3.4	+25.4	+23.7	+7.8	+5.6
East South Central: Birmingham	+5.0	+29.3	+25.4	+7.3	+7.2
West South Central: Houston	+3.2	+22.5	+21.0	+6.2	+4.6
Mountain: Denver	+2.5	+24.3	+22.6	+6.1	+4.6
Pacific:					
Los Angeles	+2.1	+25.7	+23.2	+6.9	+3.8
San Francisco	+2.7	+28.8	+25.6	+8.8	+5.8
Seattle	+2.1	+28.0	+25.8	+5.9	+4.6

[1] Based on indexes of the cost of goods purchased by wage earners and lower-salaried workers.

TABLE 4.—*Indexes of Cost of Living in Large Cities, January 15, 1944, by Groups of Items and Cities*

City	Indexes [1] (1935–39=100) of cost of—					
	All items	Food	Clothing	Fuel, electricity, and ice	House-furnishings	Miscellaneous goods and services
Average: Large cities	[2] 124.1	[3] 136.1	[4] 134.5	[5] 109.5	[4] 128.1	[4] 118.3
New England: Boston	121.1	130.9	132.4	119.7	123.6	114.6
Middle Atlantic:						
Buffalo	125.2	135.0	133.1	106.5	127.2	122.7
New York	124.7	138.0	138.0	114.1	123.3	118.3
Philadelphia	123.3	135.0	132.5	108.6	125.0	116.8
Pittsburgh	124.3	134.4	146.4	111.7	126.3	116.6
East North Central:						
Chicago	122.7	132.5	129.6	105.0	123.9	117.1
Cincinnati	123.9	135.1	135.7	105.6	132.3	118.4
Cleveland	127.6	140.7	137.8	114.7	127.5	117.8
Detroit	124.9	132.8	133.3	111.8	129.1	124.0
West North Central:						
Kansas City	121.8	130.3	130.3	109.3	121.2	121.6
Minneapolis	120.7	128.3	132.0	103.8	125.9	118.8
St. Louis	122.9	137.9	134.8	107.2	120.3	114.6
South Atlantic:						
Baltimore	126.0	142.5	137.0	109.2	132.6	115.9
Savannah	132.3	151.1	135.4	113.4	123.0	124.7
Washington, D. C.	123.6	136.4	144.2	109.3	133.2	121.6
East South Central: Birmingham	127.4	140.6	135.4	104.3	124.3	117.7
West South Central: Houston	123.4	137.5	135.0	91.2	124.0	119.4
Mountain: Denver	122.6	136.0	126.1	103.6	123.8	117.5
Pacific:						
Los Angeles	126.3	142.0	135.3	92.5	119.6	121.5
San Francisco	127.9	143.6	132.7	92.1	120.9	126.5
Seattle	128.4	142.5	133.5	103.0	126.8	127.6

[1] Based on changes in the cost of goods purchased by wage earners and lower-salaried workers.
[2] Rents surveyed at quarterly dates: March 15, June 15, September 15, December 15.
[3] Based on prices for 56 cities, collected on Tuesday nearest the 15th of the month.
[4] Based on data for 21 cities. [5] Based on data for 34 cities.

TABLE 5.—*Indexes of Cost of Living in Large Cities, 1935 to January 1944*

Year	Indexes [1] (1935–39=100) of cost of—						
	All items	Food	Clothing	Rent [2]	Fuel, electricity, and ice	House-furnishings	Miscellaneous goods and services
1935	98.1	100.4	96.8	94.2	100.7	94.8	98.1
1936	99.1	101.3	97.6	96.4	100.2	96.3	98.7
1937	102.7	105.3	102.8	100.9	100.2	104.3	101.0
1938	100.8	97.8	102.2	104.1	99.9	103.3	101.5
1939	99.4	95.2	100.5	104.3	99.0	101.3	100.7
1940	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941	105.2	105.5	106.3	106.2	102.2	107.3	104.0
1942	116.5	123.9	124.2	108.5	105.4	122.2	110.9
1942:							
Jan. 15	120.7	133.0	126.0	108.0	107.3	123.8	113.2
Feb. 15	121.0	133.6	126.2	108.0	107.2	124.1	113.6
Mar. 15	122.8	137.4	127.6	108.0	107.4	124.5	114.5
Apr. 15	124.1	140.6	127.9	108.0	107.5	124.8	114.9
May 15	125.1	143.0	127.9	108.0	107.6	125.1	115.3
June 15	124.8	141.9	127.9	108.0	107.7	125.4	115.7
July 15	123.9	139.0	129.1	108.0	107.6	125.6	116.1
Aug. 15	123.4	137.2	129.6	108.0	[3] 107.6	125.9	116.5
Sept. 15	123.9	137.4	132.5	108.0	[3] 107.6	126.3	117.0
Oct. 15	124.4	138.2	133.3	108.0	[3] 107.8	126.7	117.6
Nov. 15	124.2	137.3	133.5	108.0	[3] 107.9	126.9	117.7
Dec. 15	124.4	137.1	134.6	108.1	[3] 109.4	127.9	118.1
1944:							
Jan. 15	124.1	136.1	134.5	(?)	109.5	128.1	118.3

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers in large cities.
[2] Rents surveyed at quarterly dates: Mar. 15, June 15, Sept. 15, and Dec. 15.
[3] Index revised because of a reporting error in Houston gas rates.

Retail Prices of Food in January 1944

PERCENTAGE changes in retail food costs on January 18, 1944, as compared with costs in January and December 1943, September 1942, January 1941, and August 1939, are given in table 1.

TABLE 1.—*Percent of Change in Retail Costs of Food in 56 Large Cities Combined,*[1] *in Specified Periods, by Commodity Groups*

Commodity group	Dec. 14, 1943, to Jan. 18, 1944	Jan. 12, 1943, to Jan. 18, 1944	Sept. 15, 1942, to Jan. 18, 1944	Jan. 14, 1941, to Jan. 18, 1944	Aug. 15, 1939, to Jan. 18, 1944
All foods	−0.7	+2.3	+7.5	+39.2	+61.6
Cereals and bakery products	+.1	+2.5	+2.9	+14.3	+38.2
Meats	+.1	−2.7	+.3	+29.6	+56.9
Beef and veal	+.1	−6.9	−5.3	+9.0	+19.8
Pork	−.2	−10.1	−9.0	+31.0	+38.2
Lamb	−.2	−2.0	+.1	+35.6	+63.4
Chickens	+.9	+7.5	+12.1	+54.2	+86.5
Fish, fresh and canned	−.8	+18.4	+32.9	+88.3	+124.4
Dairy products	0	−.5	+4.5	+27.0	+43.4
Eggs	−14.9	−7.5	−.8	+58.1	+80.8
Fruits and vegetables	+1.8	+15.7	+28.5	+78.7	+93.4
Fresh	+2.2	+19.1	+34.5	+87.7	+91.9
Canned	−.2	+.5	+4.5	+41.9	+61.6
Dried	+.2	+5.9	+13.6	+63.6	+93.4
Beverages	−.2	0	+.5	+36.9	+31.1
Fats and oils	−.2	−1.7	+2.7	+54.4	+45.7
Sugar and sweets	−.1	−.6	−.3	+32.8	+22.4

[1] The number of cities included in the index was changed from 51 to 56 in March 1943, with the necessary adjustments for maintaining comparability. At the same time the number of foods in the index was increased from 54 to 61.

TABLE 2.—*Indexes of Retail Food Costs in 56* [1] *Large Cities Combined,*[2] *by Commodity Groups, on Specified Dates*

[1935–39=100]

Commodity group	1944	1943		1942	1941	1939
	Jan. 18[3]	Dec. 14	Jan. 12	Sept. 15	Jan. 14	Aug. 15
All foods	136.1	137.1	133.0	126.6	97.8	84.3
Cereals and bakery products	108.5	108.4	105.9	105.4	94.9	78.4
Meats	131.0	130.9	134.7	130.6	101.1	83.7
Beef and veal	119.3	119.2	128.2	126.0	109.4	99.8
Pork	112.8	113.0	125.5	124.0	86.1	82.9
Lamb	133.8	134.1	136.6	133.7	98.7	81.9
Chickens	149.9	148.5	139.4	133.7	97.2	80.4
Fish, fresh and canned	223.5	225.2	188.7	168.2	118.7	99.4
Dairy products	133.5	133.5	134.2	127.7	105.1	93.1
Eggs	154.0	181.0	166.5	155.2	97.4	95.7
Fruits and vegetables	166.7	163.7	144.1	129.7	93.3	85.4
Fresh	175.3	171.5	147.2	130.3	93.4	92.9
Canned	129.7	130.0	129.1	123.8	91.4	81.6
Dried	162.9	162.5	153.8	143.4	99.6	88.3
Beverages	124.4	124.7	124.4	123.8	90.9	84.9
Fats and oils	124.0	124.3	126.2	120.7	80.3	84.5
Sugar and sweets	126.6	126.7	127.4	127.0	95.3	88.6

[1] Indexes based on 51 cities combined prior to March 1943.
[2] Aggregate costs of 61 foods (54 foods prior to March 1943) in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined with the use of population weights.
[3] Preliminary.

TABLE 3.—*Indexes of Average Retail Cost of All Foods, by Cities,*[1] *on Specified Dates*

[1935-39=100]

City	1944	1943		1942	1941
	Jan. 18[2]	Dec. 14	Jan. 12	Sept. 15	Jan. 14
United States	136.1	137.1	133.0	126.6	97.8
New England:					
Boston	130.9	130.9	130.5	124.4	95.2
Bridgeport	135.1	136.7	132.5	127.1	96.5
Fall River	131.2	132.6	131.3	125.7	97.5
Manchester	132.5	133.8	133.4	126.8	96.6
New Haven	136.3	136.9	132.1	126.2	95.7
Portland, Me	132.3	134.4	131.7	125.8	95.3
Providence	132.0	134.2	130.8	126.3	96.3
Middle Atlantic:					
Buffalo	135.0	137.6	137.3	127.6	100.2
Newark	140.7	139.4	135.5	128.0	98.8
New York	138.0	139.1	133.1	125.2	99.5
Philadelphia	135.0	136.1	130.2	123.9	95.0
Pittsburgh	134.4	135.1	133.4	125.9	98.0
Rochester	131.5	132.5	132.2	125.2	99.9
Scranton	134.7	136.2	133.7	125.6	97.5
East North Cen.:					
Chicago	132.5	133.7	129.9	124.9	98.2
Cincinnati	135.1	135.9	131.0	126.9	96.5
Cleveland	140.8	142.6	134.6	127.3	99.2
Columbus, Ohio	128.1	130.7	126.9	119.6	93.4
Detroit	132.8	134.2	130.0	124.7	97.0
Indianapolis	133.3	134.4	131.3	127.1	98.2
Milwaukee	130.5	132.9	129.0	121.0	95.9
Peoria	138.4	140.8	136.1	130.7	99.0
Springfield, Ill	138.7	141.0	136.4	130.2	96.2
West North Cen.:					
Cedar Rapids[4]	137.6	139.7	130.3	121.2	95.9
Kansas City	130.3	132.7	127.3	120.7	92.4
Minneapolis	128.3	132.3	129.1	123.3	99.0
Omaha	131.1	132.2	128.6	123.2	97.9
St. Louis	137.9	139.3	133.1	126.7	99.2
St. Paul	127.1	131.8	128.0	120.8	98.6
Wichita[4]	146.1	148.8	139.2	132.0	97.2
South Atlantic:					
Atlanta	138.0	137.3	132.5	125.9	94.3
Baltimore	142.5	142.5	139.1	131.2	97.9
Charleston, S. C.	134.2	134.4	131.0	126.6	95.9
Jacksonville	145.8	144.2	139.7	134.2	98.8
Norfolk[3]	145.1	145.1	139.2	131.9	95.8
Richmond	134.7	136.0	132.4	126.2	93.7
Savannah	151.1	149.7	139.8	133.3	100.5
Washington, D. C	136.4	135.9	133.8	128.1	97.7
Winston-Salem[4]	136.9	137.5	127.8	119.8	93.7
East South Cen.:					
Birmingham	140.6	141.2	131.4	125.3	96.0
Jackson[4]	142.9	144.6	148.5	141.0	105.3
Knoxville[4]	154.3	157.4	141.4	134.2	97.1
Louisville	132.6	134.0	128.9	124.2	95.5
Memphis	146.0	144.5	137.2	129.7	94.2
Mobile	145.5	144.9	139.5	133.9	97.9
West South Cen.:					
Dallas	134.5	135.5	127.2	123.7	92.6
Houston	137.5	137.3	134.8	130.8	102.6
Little Rock	134.7	135.5	130.6	129.2	95.6
New Orleans	149.9	149.0	144.8	135.9	101.9
Mountain:					
Butte	135.3	137.2	131.8	124.6	98.7
Denver	136.0	138.7	132.6	126.8	94.8
Salt Lake City	138.6	141.3	139.0	130.1	97.5
Pacific:					
Los Angeles	142.0	143.3	141.8	137.9	101.8
Portland, Oreg	142.5	144.9	146.4	141.2	101.7
San Francisco	143.6	143.7	141.3	133.5	99.6
Seattle	142.5	143.1	143.5	137.3	101.0

[1] Aggregate costs of 61 foods in each city (54 foods prior to March 1943), weighted to represent total purchases of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights. Primary use is for time-to-time comparisons rather than place-to-place comparisons.

[2] Preliminary.

[3] Includes Portsmouth and Newport News.

[4] Indexes based on June 1940=100.

TABLE 4.—*Indexes of Retail Food Costs in 56 Large Cities Combined,*[1] *1913 to January 1944*

Year	All-foods index	Year	All-foods index	Year and month	All-foods index	Year and month	All-foods index
1913	79.9	1928	130.8	1942:		1943:	
1914	81.8	1929	132.5	January	116.2	February	133.6
1915	80.9	1930	126.0	February	116.8	March	137.4
1916	90.8	1931	103.9	March	118.6	April	140.6
1917	116.9	1932	86.5	April	119.6	May	143.0
1918	134.4	1933	84.1	May	121.6	June	141.9
1919	149.8	1934	93.7	June	123.2	July	139.0
1920	168.8	1935	100.4	July	124.6	August	137.2
1921	128.3	1936	101.3	August	126.1	September	137.4
1922	119.9	1937	105.3	September	126.6	October	138.2
1923	124.0	1938	97.8	October	129.6	November	137.3
1924	122.8	1939	95.2	November	131.1	December	137.1
1925	132.9	1940	96.6	December	132.7	1944:	
1926	137.4	1941	105.5	1943:		January	136.1
1927	132.3	1942	123.9	January	133.0		

[1] Indexes based on 51 cities combined prior to March 1943.

Electricity and Gas: Price Changes in 1943

Prices of Electricity

RESIDENTIAL rates for electricity are obtained quarterly by the Bureau of Labor Statistics, in March, June, September, and December, from 51 cities. These rates are used for computing net monthly bills in each city for quantities of electricity which have been selected as representative of average use throughout the country for each of three combinations of services.

Reports for March, June, and September discuss only the changes which occurred during the preceding 3 months. The December (present) report discusses changes for the year.[1]

Costs of electricity for household use decreased about three-tenths of 1 percent in 1943, continuing the general downward trend of many years which was interrupted in 1942 by a slight advance of about one-tenth of 1 percent. Lower rates became effective in four southern cities and one Pacific Coast city during 1943.

Indexes of the cost of 25 kilowatt-hours and 100 kilowatt-hours for the 51 cities combined are shown in table 1 for December of specified years and for quarterly periods from 1940 through 1943.

TABLE 1.—*Indexes of Retail Prices of Electricity for 51 Cities Combined, December of Specified Years 1923–29, and March, June, September, and December 1940 to 1943*

[1923–25=100]

Date	Lighting and small appliances 25 kwh.	Lighting, appliances, and refrigerator 100 kwh.	Date	Lighting and small appliances 25 kwh.	Lighting, appliances, and refrigerator 100 kwh.
1923: December	101.1	101.2	1941: March	72.9	84.7
1925: December	97.3	97.1	June	72.9	84.7
1927: December	94.0	91.5	September	72.4	84.2
1929: December	89.7	84.4	December	72.2	84.1
1931: December	88.3	77.0	1942: March	72.2	84.1
1933: December	84.9	75.1	June	72.2	84.1
1935: December	80.7	70.2	September	72.3	84.2
1937: December	76.0	67.4	December	72.3	84.2
1939: December	73.7	65.6	1943: March	72.3	84.2
1940: March	73.6	65.7	June	72.2	84.1
June	73.2	65.3	September	72.0	84.0
September	73.0	65.0	December [1]	72.0	84.0
December	72.9	64.8			

[1] Indexes are preliminary.

DETAILS BY CITIES

Indexes of price changes for each of 51 cities for the use of 25 kilowatt-hours and 100 kilowatt-hours, for March, June, September, and December 1943 and for December 1942; and monthly bills and average prices per kilowatt-hour for amounts of electricity representative of the requirements of three residential services in December 1943, will be published in a bulletin now under preparation.

[1] Average prices for electricity for 25, 40, and 100 kilowatt-hours for 1923 through 1938 are shown in Bulletin No. 664.

PRICE CHANGES BETWEEN DECEMBER 1942 AND DECEMBER 1943

Electricity rates were reduced in 1943 in the following five cities—Atlanta, Memphis, Mobile, Washington, D. C., and Los Angeles. A slight advance occurred in New York City, as a result of adjustments in rates to compensate for higher costs of fuel. In Atlanta, where the "Objective Rate Plan" was discontinued and the lower or "Inducement" rate was made available to all customers, the reductions applied only to those formerly billed under the "Immediate" rate. Consumers in Washington, D. C., using 34 kilowatt-hours or less per month and those in Mobile using 200 kilowatt-hours or under were not affected by lower rates. The percentage changes in costs of specified amounts of electricity between December 1942 and December 1943 in each of the six cities are shown in table 2.

TABLE 2.—*Percent of Change in Cost of Electricity, December 1942 to December 1943, in Specified Cities*

City	Percent of change in net monthly bills for specified amounts of electricity		
	25 kilowatt-hours	100 kilowatt-hours	250 kilowatt-hours
New York:			
Company serving Bronx, Brooklyn, Manhattan and Queens	+0.7	+1.2	+1.4
Company serving Richmond	+.6	+.2	+.4
Atlanta[1]	−15.9	−11.4	−6.8
Washington, D. C	0	−2.0	−.8
Memphis	−12.8	−13.2	−13.0
Mobile	0	0	−2.1
Los Angeles	−6.4	−3.7	−2.4

[1] Decrease only to customers formerly billed under "Immediate" rate.

Prices of Gas

Residential rates for gas are obtained quarterly in March, June, September, and December from 50 cities. These rates have been used for computing net monthly bills for each city, for quantities of gas which approximate the average residential consumption requirements per month for each of four combinations of services. In order to put the prices on a comparable basis, it was necessary to convert the consumption requirements used for computing monthly bills into equivalent heating values expressed in therms (1 therm=100,000 B. t. u.)

Reports published for March, June, and September show only the changes by cities for the preceding 3 months. The December (present) report discusses changes for the year.[2]

PRICES, BY KINDS OF GAS, ON DECEMBER 15, 1943

Indexes covering costs of the kind of gas in each of 50 cities in December 1943 showed decreases since December 1942 of 0.7 percent for 10.6 therms and 2.6 percent for 30.6 therms. The decrease was due to rate reductions for natural and mixed manufactured and natural gas, which overbalanced increases for manufactured gas in the New England area allowed to cover adjustments in rates for changes in costs of fuels. The December 1943 indexes for manufactured gas were

[2] Average prices of gas for 10.6 therms and 30.6 therms for 1923 through June 1936 are shown in Bulletin No. 628.

0.1 percent higher than in December 1942, whereas indexes for natural gas fell about three-fourths of 1 percent during the year and those for mixed manufactured and natural gas dropped 3.3 percent for 10.6 therms and 13.7 percent for 30.6 therms.

Table 3 presents composite indexes for each of 2 services for all kinds of gas, for 50 cities combined, and separate indexes for manufactured, natural, and mixed manufactured gas for December of specified years from 1923 through 1939 and for quarterly periods from 1940 through 1943.

TABLE 3.—*Indexes of Retail Prices of Gas, December of Specified Years, 1923–39, and March, June, September, and December 1940, 1941, 1942, and 1943*

[1923–25=100]

Date	10.6 therms, range				30.6 therms, range and automatic water heater			
	All gas, 50 cities	Manufactured 1923, 40 cities; 1941, 24 cities	Natural 1923, 7 cities; 1941, 19 cities	Mixed 1923, 3 cities; 1941, 7 cities	All gas, 50 cities	Manufactured 1923, 40 cities; 1941, 24 cities	Natural 1923, 7 cities; 1941, 19 cities	Mixed 1923, 3 cities; 1941, 7 cities
1923: December	99.5	99.5	99.3	99.4	99.5	99.6	98.5	98.4
1925: December	100.2	99.7	107.1	98.9	100.2	99.6	108.1	98.9
1927: December	100.1	99.6	109.3	101.0	99.3	99.0	108.0	101.0
1929: December	99.7	100.1	119.2	98.2	95.4	97.0	108.3	98.1
1931: December	98.3	100.0	119.2	99.3	91.1	94.2	108.2	98.8
1933: December	97.2	99.2	118.8	97.7	88.4	92.1	107.9	93.2
1935: December	97.2	100.0	114.1	98.3	86.8	90.4	104.6	92.4
1937: December	96.8	100.0	112.7	98.4	85.1	89.4	101.2	92.4
1939: December	99.8	101.4	116.0	107.4	85.9	89.7	102.9	94.0
1940: March	99.9	101.6	115.9	107.4	85.7	89.4	103.2	94.0
June	98.2	101.6	115.6	98.6	82.3	84.8	103.1	93.9
September	98.3	101.6	116.0	98.4	82.3	84.8	103.5	93.6
December	98.0	101.6	114.8	98.2	84.5	88.7	102.3	93.3
1941: March	97.8	101.6	113.4	98.1	84.1	88.7	99.2	93.2
June	97.8	101.6	113.4	98.3	81.5	84.5	99.2	93.4
September	97.5	101.1	113.2	98.3	81.2	84.1	98.5	93.4
December	97.2	100.7	113.2	98.1	83.6	87.9	99.2	93.2
1942: March	97.2	100.7	113.1	98.2	83.6	87.9	99.1	93.3
June	97.4	100.9	113.4	98.0	81.1	83.9	99.3	93.1
September	97.8	101.6	113.4	98.0	81.3	84.3	99.2	93.2
December	97.8	101.6	113.4	98.0	83.9	88.4	99.2	93.1
1943: March	97.2	101.6	112.8	95.2	81.8	88.4	98.9	78.5
June	97.1	101.6	112.6	95.2	79.2	84.3	98.8	78.5
September	97.0	101.7	112.3	94.8	79.1	84.3	98.5	77.9
December [1]	97.1	101.7	112.4	94.8	81.7	88.5	98.6	77.9

[1] Indexes are preliminary.

DETAILS BY CITIES

Indexes of price changes for each of the 50 cities for 10.6 therms and 30.6 therms for March, June, September and December 1943 and December 1942, and net monthly bills and average prices per thousand cubic feet and per therm for each of 4 services, based on rates effective December 15, 1943, will appear in a bulletin now under preparation.

PRICE CHANGES BETWEEN DECEMBER 1942 AND DECEMBER 1943

Changes in costs of gas in 1943 occurred in 12 cities. The factors contributing to changes in costs of gas, one or more of which affected costs in each city, were changes in rates, adjustments in basic rates under "fuel clauses," designed to cover costs of fuels used in manufacturing the gas, and changes in the heating value of the gas served. The following list shows the 12 cities, classified by kinds of gas served and nature of the change.

	Manufactured gas	*Natural gas*	*Mixed manufactured and natural gas*
Rate changes	New York (seasonal).	Atlanta. Mobile. Houston. San Francisco.	Chicago. Minneapolis.
Adjustments for fuel costs.	Boston. Fall River. Manchester. Portland, Maine		
Changes in heating value of gas.		Mobile. Houston. New Orleans.	

Changes in costs of manufactured gas in 5 cities in 1943 included adjustments to basic rates to cover fluctuations in fuel costs in 4 New England cities and the usual seasonal reduction in New York during the summer months for gas used in excess of the first 3,000 cubic feet per month. Two or more changes occurred in all 5 cities during the year.

Costs of natural gas were lowered in 5 cities between December 1942 and December 1943. Rate reductions occurred in Atlanta and San Francisco; there was an increase in the heating value of the gas in New Orleans; and decreases in Mobile and Houston were due to the combined effect of lower rates and increases in the heating value of the gas.

Lowering of rates during 1943 for mixed manufactured and natural gas in Chicago and Minneapolis followed reductions in costs of the natural gas piped from southwestern fields. The percentages of change for the year, in the cost of the different kinds of gas, are shown in table 4.

TABLE 4.—*Percent of Change in Cost of Gas in Specified Cities, December 1943, Compared with December 1942*

Kind of gas, and city	Percent of change in net monthly bills for specified amounts of gas			
	10.6 therms	19.6 therms	30.6 therms	40.6 therms
Manufactured gas:				
Boston:				
Company 1	+0.4	+0.2	+0.3	+0.3
Company 2	+2.5	+2.5	+2.9	+3.0
Fall River	+6.9	+8.4	+9.2	+9.6
Manchester	0	0	+.2	+.1
Portland, Maine	0	0	0	0
New York	0	0	0	0
Natural gas:				
Atlanta	−4.5	−3.0	−2.1	−1.8
Mobile	−13.3	−9.6	−7.3	−7.2
Houston:				
Company 1	−6.1	−7.2	−7.8	−8.3
Company 2	−5.1	−5.9	−6.4	−6.5
New Orleans	−1.8	−2.3	−2.4	−2.5
San Francisco	−6.5	−5.5	−5.2	−5.2
Mixed manufactured and natural gas:				
Chicago	−4.6	−12.0	−20.7	−18.0
Minneapolis	−9.1	−16.2	−20.2	−22.6

Wholesale Prices

Market Prices of Building Materials in Two Wars[1]

THE German army had hardly crossed the Polish border in 1939 before American suppliers of building materials were "in the war." After the defense program was inaugurated in this country, attention was first turned to building training camps for soldiers later to be inducted, to building factories for the production of military weapons, and to defense housing.

World wars, involving as they do every segment of a national economy, have in the past had violent effects on prices and pricing practices. However, history (in this case, price history) does not always repeat itself. Prices of building materials in the present war have not found their levels entirely as a result of wartime supply and demand. Price control was imposed early in this war and has been effective in stabilizing prices at levels about one-fourth higher than at the outbreak of hostilities.

The first World War lasted approximately 52 months. As World War II started about 52 months ago, this is a particularly appropriate time to examine the trend of building-material prices in the two war periods. Since prices at the outbreak of each war were at different levels, this article will concern itself with *relative* changes in prices, for use in making comparisons, and will review the general types of controls exercised over prices at the producer level in each war and their relative effectiveness.

Price-Control Measures

Price control during the first World War.—From September 1917 to March 1918 building-material prices were formally controlled by the War Industries Board, created in July 1917; from March 1918 until after the Armistice, control was exercised by the Price Fixing Committee established by the President in March 1918. Although the Committee and the Board were independent of each other, they worked in close cooperation. The Committee's legal powers for enforcing prices were doubtful but it did have two powerful weapons to use against violators, namely, the right to commandeer goods and services, and an aroused public opinion.

Price fixing and price control in the building-materials field had three principal effects during the first World War. (1) Owing to the fact that private building was considered nonessential, prices were generally fixed at a level calculated to discourage rather than stimulate production. Government orders amounted to only 25 percent of the normal demand for building materials, and private building

[1] Prepared in the Bureau's Industrial Prices Division by Thomas P. Henson, assisted by John W. Corbett, Jr.

declined, in physical magnitude, to 20 percent of its pre-war level. This situation made it unnecessary to regulate all building-material prices, many of which were lagging behind the general increase of the price level of all commodities. Prices were fixed at such a point as to keep profits normal and in some cases to force out marginal producers.

(2) Irregularity of production and delay in filling orders led the Government to encourage the various manufacturers of building materials to form central bodies through which large orders could be handled and the business allocated fairly among the members. Several important trade associations which were formed during the last war as a result of this situation are still rendering service to the industry.

(3) Price fixing led to standardization. Such a result is inevitable if a fixed price is to apply to a certain size, grade, and quality of product.

It is interesting to observe that certain building-material prices were not brought under price control during the first war. However, comparison of the uncontrolled with controlled prices reveals the same trend in rate of increase.

Price control in the present war.—In May 1940 the President established the Advisory Commission to the Council for National Defense and appointed Leon Henderson Commissioner in Charge of Price Stabilization. On April 11, 1941, by Executive order, the Office of Price Administration and Civilian Supply was created and Mr. Henderson was made Administrator. The new agency took over the price, consumer, and (in part) the agricultural divisions of the Advisory Commission. Its name was later shortened to the Office of Price Administration. The Civilian Supply Division was transferred to the Office of Production Management by another Executive order on August 28, 1941.

On April 28, 1942, the Office of Price Administration issued the General Maximum Price Regulation which provided that, with certain exceptions, manufacturers', wholesalers' and retailers' prices were to go no higher than the highest price which the respective commodities commanded in March 1942.

The purpose of this regulation was to stabilize the national economy so that war production would be encouraged.

The effectiveness of price control during this war is indicated by the fact that average prices for all building materials rose 23 percent from August 1939 to March 1942, and only 2½ percent in the following 21 months under the operation of the General Maximum Price Regulation.

Trends in Volume and Cost of Construction

The pressures on prices of building materials during this war have been very great. The cost of new construction alone nearly doubled from 1940 to 1942, when the construction program reached its peak, increasing from 7 billion to 13½ billion dollars. The drop since 1942 has been almost as great, and the preliminary figures for 1943 place the cost of new construction at about 7⅓ billion dollars. This is due in part to the restrictions applied to private residential building. Table 1 compares construction in both war periods,

showing number of dwelling units, and total expenditures for new construction.

TABLE 1.—*Dwelling Units Constructed, and Construction Expenditures, First and Second World Wars*

Year	Estimated number of units [1]	Expenditures for construction (in millions of dollars) [2]		
		Total	Private	Public
1915	475,000	2,855	2,140	715
1916	480,000	3,326	2,624	702
1917	230,000	3,988	2,715	1,273
1918	120,000	4,576	2,345	2,231
1940	603,000	6,986	4,232	2,754
1941	715,000	11,135	5,251	5,884
1942	497,000	13,544	2,877	10,667
1943	351,000	[3] 7,353	[3] 1,606	[3] 5,747

[1] Estimates of Bureau of Labor Statistics Division of Construction and Public Employment.
[2] Estimates for the years 1915 through 1918 from U. S. Bureau of Foreign and Domestic Commerce; estimates for the years 1940 through 1943 from Bureau of Labor Statistics, Division of Construction and Public Employment.
[3] Preliminary.

Trend of Building-Material Prices

Table 2 and the chart show the percent of increase in building-material prices in each war period. Prices of all building materials during the first World War rose 92.4 percent. During a similar period in the present war, prices increased only 26.6 percent.

TABLE 2.—*Prices of Building Materials, by Groups, World Wars I and II*

Group	World War I			World War II		
	Indexes (1926=100)		Percent of change	Indexes (1926=100)		Percent of change
	July 1914	November 1918		August 1939	December 1943	
All building materials	52.9	101.8	+92.4	89.6	113.4	+26.6
Brick and tile	38.8	73.7	+89.9	90.5	100.0	+10.5
Cement	55.1	99.1	+79.9	91.3	93.6	+2.5
Lumber	50.2	83.7	+66.7	90.1	144.0	+59.8
Paint and paint materials	51.5	133.8	+159.8	82.1	103.3	+25.8
Plumbing and heating [1]				79.3	91.8	+15.8
Structural steel	58.7	153.2	+161.0	107.3	107.3	0
Other building materials	59.4	126.9	+113.6	89.5	102.8	+14.9

[1] Not calculated as a separate subgroup until 1926.

The group of building materials covered by the Bureau's index at present includes 109 price series representing products used in the building industry. These products are divided into seven subgroups including brick and tile, cement, lumber, paint and paint materials, plumbing and heating equipment, structural steel, and other building materials. Examination of the price movements of the individual subgroups reveals some very marked contrasts.

BRICK AND TILE

Brick and tile prices rose 90 percent during the first World War. However, during the corresponding period in the present war, prices

PERCENT INCREASE IN PRICES OF BUILDING MATERIAL
IN FIRST WORLD WAR AND IN PRESENT WAR
FIRST WORLD WAR
JULY 1914 TO DECEMBER 1918
PRESENT WAR
AUGUST 1939 TO DECEMBER 1943
PERCENT
200
150
100
50
0
92.4% 26.8%
ALL BUILDING MATERIALS
69.9% 10.5%
BRICK & TILE
79.9% 2.5%
CEMENT
66.7% 59.6%
LUMBER
139.8% 25.8%
PAINT & PAINT MATERIALS
19.8%
PLUMBING & HEATING
161.0% 0.0%
STRUCTURAL STEEL
113.6% 14.9%
OTHER BUILDING MATERIALS
* NO DATA AVAILABLE
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

of these products increased by only 10½ percent. No serious shortages have existed in this group of building materials during this war, and it is reported that certain of them have sold below ceiling prices in some localities. This situation prevails despite the fact that clay products have been used to some degree to alleviate the shortage of lumber. Brick and tile prices have been regulated in this war by the General Maximum Price Regulation and Maximum Price Regulation No. 188, effective August 1, 1942. Regulation No. 188 amends and simplifies the pricing of certain building materials and consumer goods.

During the first World War there was a shortage of brick in the crowded industrial cities of the eastern seaboard. As a result, price control, applicable to Government orders only, went into effect shortly before the Armistice. Since the Government required only slightly more than 1 percent of the total production of brick in 1917 and 1918, Government price fixing had no appreciable effect upon the average price of brick throughout the country. However, it led to the formation of an association of common-brick manufacturers in July 1918 and also helped the industry to standardize its production. Prices of hollow tile were also fixed at local markets, although the use of hollow tile diminished greatly during the war. The price controls applied during the period June–December 1918 only.

CEMENT

Between 1914 and 1918 cement prices rose 80 percent. The rise in this war has been 2.5 percent. In World War I, cement ranked next to lumber as a war building material. The congestion of Government orders in certain cities on the eastern seaboard caused prices to ascend rapidly. Throughout the Nation as a whole there was an adequate supply of portland cement, but because of its bulk this commodity has always been marketed locally. In 1918, prices retroactive to July 1917 were fixed for Army and Navy orders at 30 different producing points, but sales to the public were not controlled, and cement sold at an average of 30 cents a barrel higher in the open market than to the Government. Of a total production of 163 million barrels of cement in 1917 and 1918, only 11 million were sold at fixed prices. When prices were first pegged, cement producers were allowed 12 percent on their investment, but this was later reduced to 6 percent. Cement prices in this war have been controlled by the General Maximum Price Regulation and by Maximum Price Regulation No. 224 which took effect in September 1942. In order to relieve shortages in certain areas, the latter regulation permitted shipments of cement to be made outside their usual distributing area at prices slightly higher than were allowed by the GMPR, so that the additional freight charges would be passed on to the consumer. No Nation-wide shortage of cement has occurred during this war.

LUMBER

Lumber has practically duplicated its price history in the earlier war. The current selling price is 60 percent higher than its prewar average, while at the cessation of hostilities in 1918 prices of lumber had increased more than 66 percent. The demand for 1 billion feet of southern yellow pine for cantonment purposes after

the outbreak of the first World War started lumber prices soaring. Although the ultimate supply of structural timber far exceeded this amount, the need for immediate delivery created a shortage and was accompanied by a price rise. Prices were first controlled by a lumber committee of the Council of National Defense, working with a committee representing the entire southern pine industry. In June 1917, the two committees agreed on maximum prices for southern pine; control over most other species followed. These informal agreements were amended from time to time. In March 1918 the price-fixing committee of the War Industries Board took over the assignment and before Armistice day controlled the price of lumber to all buyers.

In the present war, lumber has proved a far more complex and therefore more difficult commodity to bring under control. The unprecedented demand for softwoods, as soon as the need for mobilizing an army was seen, naturally brought about rapid increases in prices. The pressure for higher wages to hold sufficient manpower in this vital industry naturally had an upward effect on production costs and therefore on prices. The manpower problem has perhaps not been so acute in any other essential industry as in lumber manufacturing. At the present time mill stocks are dangerously low and retail lumberyards are practically bare. Southern pine and Douglas fir, the two principal species of lumber, were placed under allocation orders by the War Production Board after unsuccessful attempts by the War and Navy Departments to meet their requirements by other means. The Office of Price Administration placed ceiling prices on Douglas fir and southern pine in the fall of 1941, following repeated warnings to the industry that lumber prices were rising too rapidly. Official price regulations and amendments in the lumber industry are too numerous to mention, but it is sufficient to say that, particularly on southern pine lumber, price ceilings have been revised upward several times in an attempt to encourage production.

Lumber production figures in the two wars are shown below.[2]

	Production (billions of bd. ft.)		*Production (billions of bd. ft.)*
1914	37. 5	1939	25. 7
1915	37. 0	1940	32. 1
1916	39. 8	1941	35. 9
1917	35. 8	1942	36. 3
1918	31. 9	1943	[1] 32. 4

[1] From War Production Board, Statistics Section, Lumber Division.

STRUCTURAL STEEL

Owing to the runaway behavior of steel prices in 1914–18, iron and steel prices in this war received the attention of the authorities long before other commodities were controlled. The Government action was so thorough that quoted prices of structural steel now stand at exactly the same level as in August 1939. In a comparable period in the last war they advanced more than 160 percent. As a result of studies of various Government–industry committees, of investigations of costs by the Federal Trade Commission, and of the desire of the steel industry itself to stabilize prices, a Presidential proclamation on September 24, 1917, fixed dollar-and-cent prices on

[2] Data are from U. S. Bureau of the Census and U. S. Forest Service.

purchases of raw materials. This proclamation also called for maintenance of prevailing wage rates; and the steel industry was ordered to pledge itself "to exert every effort necessary to keep up the production to the maximum of the past as long as the war lasts." Prices of semifinished steel products were fixed on October 11, 1917, and those of certain finished products on November 5, 1917. At the request of the President, the American Iron and Steel Institute regulated thousands of price differentials as a result of these actions. The War Industries Board handled most of the price regulation of the industry, having authority till March 1918, when the Price Fixing Committee assumed control.

Structural-steel prices in this war have been the most stable of all building materials. It was the first of these materials to become Federally controlled. On April 22, 1941, the Office of Price Administration issued Price Schedule No. 6, which froze steel prices at the mill at levels which prevailed during the first quarter of 1941. On December 15, 1941, prices of iron and steel products at practically all levels of distribution were frozen at the April 15, 1941, price level.

PAINT AND PAINT MATERIALS

Prices of paint and paint materials in the first World War showed an increase six times as great as thus far in the present war. In 1918 these prices were 160 percent higher than in July 1914, while in a comparable period in this war they advanced only 26 percent.

A partial explanation may be that in the first World War there was no control over prices of paint and paint materials as represented in the Bureau of Labor Statistics index. With the exception of linseed oil, gum rosin, and gum turpentine, the prices of all important raw materials as well as of ready-mixed paint have been under control for the past 2 years. Turpentine is the only raw material used in paint which has had a greater increase in price in this war than in the last. Prices of turpentine are now 200 percent higher than in August 1939, while during the last war turpentine prices advanced less than 57 percent.

It is interesting to note that in the past 4 years prices of ready-mixed paints have advanced only 7 percent, whereas the prices of the raw materials of which they are composed have advanced about 53 percent.

Linseed oil, which in May 1943 was placed under price control, advanced 75 percent, compared with a 206-percent increase during the first World War.

The price of putty rose over 300 percent in the last war, while the current price is only 11 percent higher than in 1939. Shellac is 252 percent higher, compared with 369 percent in World War I.

The General Maximum Price Regulation replaced temporary regulation No. 19, which regulated prices of oil paints, and varnish. Because of a shortage of oils for defense purposes, the War Production Board, by conservation order M–332, in July 1943 ordered paint manufacturers to restrict their use of linseed oil in paints for civilian use. The Office of Price Administration permitted manufacturers to change their paint formulas in order to conform to this order but did not require them to reduce their price, provided the quality of the paint remained substantially the same.

PLUMBING AND HEATING EQUIPMENT [3]

The plumbing and heating industry has been one of the hardest hit by requirements of war production. Materials used in the production of such items as bathtubs, sinks, lavatories, closets, etc., have been classified either as strategic or critical, and vastly reduced amounts of them have been allotted by the War Production Board to this industry. The WPB has issued limitation orders which in general ban the sale of plumbing fixtures and heating supplies, requiring critical metals, to consumers except those who obtain a high priority rating.

As a result of the above rulings, enameled-iron bathtubs went out of production for more than a year, and metal jackets were removed from heating boilers. Wherever possible cast iron replaced steel, aluminum, copper, and brass, and victory models began to appear on the market.

Price regulation was extended to this industry, in the spring of 1942, by temporary order No. 17 and a few weeks later by the General Maximum Price Regulation, which froze prices at their March 1942 levels. In November 1942 specific dollar-and-cent ceilings were imposed on heating boilers and radiation, which rolled back prices of boilers 5 percent and radiation 12 percent. As a result of these orders, prices of plumbing and heating equipment declined during 1942 by about 9 percent, leaving a net increase since the beginning of the war of 16 percent. From August 1939 to December 1943 laundry tubs increased in price by 34 percent; lavatories, by 24 percent; closets, by 18 percent; radiation, by 17 percent; range boilers, by 16 percent; and sinks, by 11 percent.

OTHER BUILDING MATERIALS

Certain materials used in the building trades, which do not logically fit into the other groups, have been classified as "other building materials" for purposes of measuring price movements. In the last war this group advanced more than 113 percent in price, compared with a 15-percent rise in the present conflict. Window glass, for example, went up more than 200 percent in price between 1914 and 1918, while today's glass prices are the same as they were in 1939.

Hydrated lime has advanced in price less than 3 percent in this war, contrasted with a 112-percent rise in the first World War. Cast-iron pipe, like all products requiring metal, "ran away" in price during World War I, advancing 230 percent, whereas in this war its price has risen only 6½ percent. In the first war, gravel rose 85 percent and sand 63 percent, compared with a rise of only 6 to 7 percent in this war.

The history of Government regulation of prices of materials in this group covers informal agreements superseded by special price schedules and by the General Maximum Price Regulation. Glass, roofing materials, and insulating board were affected by Price Schedule No. 45 issued in November 1941, which restrained the prices on these commodities. However, informal agreements had more to do with price stability during the year 1941 than did actual regulation.

Price movements during the two wars for all building materials and for the component subgroups are shown in table 3.

[3] Prices for plumbing and heating equipment were not collected during World War I, therefore comparisons with price movements for that period cannot be made.

TABLE 3.—*Indexes of Building-Material Prices in Two Wars*

Year and month	Brick and tile	Cement	Lumber	Paint and paint materials	Plumbing and heating	Structural steel	Other building materials	All building materials
	Indexes (July 1914=100)							
1914								
Average for year	100.0	99.8	99.4	98.4	(1)	102.2	100.8	99.4
January	99.2	99.3	101.6	97.7	(1)	95.7	102.5	100.6
February	99.2	98.2	101.8	99.2	(1)	104.4	103.0	101.3
March	99.2	102.0	102.0	99.0	(1)	106.5	102.9	101.9
April	99.2	102.0	101.2	99.8	(1)	100.0	102.2	101.1
May	98.7	100.0	100.6	98.3	(1)	100.0	101.7	100.4
June	98.7	99.8	100.6	97.9	(1)	100.0	100.8	100.2
July	100.0	100.0	100.0	100.0	(1)	100.0	100.0	100.0
August	100.0	102.0	100.2	103.9	(1)	106.6	99.8	100.9
September	100.0	102.7	99.4	101.7	(1)	106.6	99.5	100.2
October	100.0	101.1	95.6	97.3	(1)	106.6	98.5	97.5
November	100.0	99.3	94.8	92.8	(1)	102.2	96.6	96.0
December	100.0	90.4	94.6	91.0	(1)	97.8	98.7	95.5
1915								
Average for year	100.8	92.6	97.0	106.4	(1)	111.2	109.6	101.1
January	99.2	87.5	95.0	94.9	(1)	95.7	99.7	98.7
February	99.2	90.2	95.0	99.4	(1)	100.0	101.7	97.0
March	99.2	88.7	95.2	98.6	(1)	100.0	102.0	97.0
April	98.2	86.9	95.4	101.7	(1)	100.0	104.5	97.7
May	98.2	88.6	95.0	105.2	(1)	104.4	111.8	98.6
June	98.2	89.8	94.6	105.6	(1)	104.4	114.5	100.2
July	101.5	93.8	94.4	109.1	(1)	108.7	113.1	100.8
August	101.5	94.7	95.0	104.3	(1)	108.7	111.3	100.4
September	101.5	95.1	96.0	103.5	(1)	121.8	108.2	100.8
October	102.6	94.4	101.6	107.0	(1)	121.8	111.3	104.9
November	102.6	90.8	102.6	120.2	(1)	130.5	115.3	108.1
December	102.6	98.5	104.6	126.2	(1)	139.2	121.2	111.3
1916								
Average for year	109.3	118.7	103.8	149.7	(1)	219.6	147.8	122.8
January	101.8	108.4	108.2	131.5	(1)	156.6	127.8	116.6
February	101.8	109.3	109.2	141.4	(1)	169.7	135.2	120.4
March	101.8	116.6	110.4	147.4	(1)	206.6	141.1	123.3
April	103.9	118.9	109.6	152.0	(1)	228.3	144.6	127.4
May	103.9	121.8	108.8	147.8	(1)	228.3	149.5	127.9
June	103.9	121.6	107.4	145.2	(1)	228.3	151.7	127.4
July	112.1	118.9	107.0	148.6	(1)	228.3	150.5	127.2
August	112.1	120.5	107.6	151.3	(1)	228.3	147.5	127.6
September	112.1	121.1	108.4	150.1	(1)	232.7	150.2	128.7
October	117.8	121.8	111.8	155.9	(1)	232.7	152.2	131.6
November	116.5	122.5	113.9	161.7	(1)	234.8	154.9	134.0
December	118.3	126.1	115.8	165.0	(1)	261.0	168.5	139.7
1917								
Average for year	129.4	145.7	143.8	185.0	(1)	325.0	191.9	166.7
January	119.6	125.0	121.3	165.6	(1)	282.6	174.4	145.2
February	119.6	131.8	124.7	167.4	(1)	282.6	177.3	148.2
March	122.2	138.7	128.5	167.8	(1)	287.1	181.3	152.0
April	128.1	145.7	142.2	178.2	(1)	326.2	188.9	164.5
May	128.1	146.8	147.4	191.5	(1)	330.5	193.9	169.9
June	128.1	151.7	151.8	194.8	(1)	434.9	198.1	170.2
July	131.2	152.1	152.4	191.3	(1)	391.5	205.2	178.5
August	131.2	151.2	151.8	194.2	(1)	391.5	209.4	177.9
September	131.7	151.0	153.6	198.6	(1)	391.5	200.3	178.6
October	135.1	152.1	148.2	190.5	(1)	261.0	195.6	167.7
November	135.1	152.8	150.0	185.6	(1)	261.0	192.6	167.5
December	135.1	149.7	154.4	194.4	(1)	261.0	192.1	170.3
1918								
Average for year	171.9	171.7	166.3	236.7	(1)	261.0	203.7	186.4
January	146.4	154.6	158.4	197.5	(1)	261.0	192.6	173.7
February	146.4	155.9	158.2	198.1	(1)	261.0	196.5	176.7
March	148.5	169.5	160.4	209.7	(1)	261.0	196.1	177.9
April	164.7	170.1	168.1	213.0	(1)	261.0	196.1	183.0
May	167.5	175.7	167.3	223.1	(1)	261.0	197.6	184.5
June	169.6	175.9	167.7	235.5	(1)	261.0	202.0	187.0
July	178.9	174.2	171.7	254.6	(1)	261.0	205.2	191.9
August	185.6	177.1	170.9	263.7	(1)	261.0	209.1	193.6
September	185.6	176.7	170.7	270.7	(1)	261.0	210.1	194.3
October	189.9	175.7	167.5	259.6	(1)	261.0	212.8	192.4
November	189.9	179.9	166.7	259.8	(1)	261.0	213.6	192.4
December	189.9	176.2	167.7	251.1	(1)	261.0	212.3	191.7

[1] Not computed as separate subgroup prior to 1926.

TABLE 3.—*Indexes of Building-Material Prices in Two Wars*—Continued

Year and month	Brick and tile	Cement	Lumber	Paint and paint materials	Plumbing and heating	Structural steel	Other building materials	All building materials
	Indexes (August 1939=100)							
1939								
Average for year	101.0	100.0	103.4	100.9	99.9	100.0	100.9	101.0
January	102.1	99.2	101.6	98.7	99.2	100.0	100.1	99.9
February	102.1	99.9	101.8	98.0	99.9	100.0	99.8	100.0
March	102.2	100.2	101.4	99.3	100.0	100.0	100.3	100.2
April	102.8	100.2	101.3	99.0	100.0	100.0	100.2	100.0
May	101.3	100.2	100.4	99.4	100.0	100.0	100.1	99.9
June	100.7	100.2	99.6	100.4	100.0	100.0	100.0	99.9
July	100.1	100.2	99.4	100.1	100.0	100.0	100.1	100.1
August	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
September	100.6	100.0	104.1	103.2	100.0	100.0	100.9	101.5
October	101.1	100.0	110.5	104.4	100.0	100.0	102.7	103.6
November	101.2	100.0	111.1	103.4	100.0	100.0	103.8	103.8
December	101.2	100.0	110.4	104.1	100.0	100.0	103.6	103.8
1940								
Average for year	100.0	99.5	114.2	104.4	101.4	100.0	104.2	105.8
January	101.2	100.1	109.5	106.2	100.0	100.0	104.1	104.2
February	100.8	100.1	108.4	105.7	99.7	100.0	103.8	104.0
March	99.9	99.9	108.1	106.2	102.1	100.0	103.6	104.1
April	99.7	98.9	107.3	105.6	102.0	100.0	103.1	103.2
May	99.7	99.1	108.1	104.7	101.6	100.0	103.0	103.2
June	99.7	99.2	105.2	103.8	101.5	100.0	103.9	103.1
July	99.6	99.2	105.2	103.0	101.5	100.0	104.6	103.2
August	99.6	99.2	109.2	102.6	101.5	100.0	104.4	104.1
September	99.7	99.2	118.9	102.4	101.5	100.0	104.5	106.7
October	99.7	99.3	127.0	103.3	101.5	100.0	104.8	109.2
November	99.7	99.5	130.4	104.4	101.5	100.0	105.2	110.4
December	100.7	99.6	131.9	104.0	101.5	100.0	105.6	110.8
1941								
Average for year	103.5	100.8	136.0	111.3	106.9	100.0	109.8	115.2
January	100.9	99.5	131.4	105.6	101.5	100.0	106.0	111.2
February	101.0	99.5	130.1	105.5	103.7	100.0	106.0	110.8
March	101.1	99.5	129.5	106.5	104.4	100.0	106.4	111.1
April	101.3	99.7	129.5	108.0	104.7	100.0	107.1	111.7
May	101.5	100.2	129.6	108.8	104.7	100.0	107.6	112.1
June	102.2	100.7	130.5	110.0	104.8	100.0	108.3	112.7
July	104.1	100.9	135.7	111.6	104.9	100.0	109.9	115.1
August	105.1	100.9	141.5	113.6	109.5	100.0	111.6	117.7
September	105.7	101.0	143.3	115.3	109.8	100.0	112.0	118.8
October	106.7	101.5	143.7	116.9	110.7	100.0	113.4	119.8
November	106.7	102.0	142.8	116.1	110.8	100.0	115.3	120.0
December	106.9	102.3	143.6	117.5	112.4	100.0	114.5	120.3
1942								
Average for year	108.3	103.0	147.4	122.2	120.3	100.0	115.6	123.0
January	107.1	102.3	146.1	120.7	118.0	100.0	115.2	122.0
February	107.2	102.3	147.3	121.7	123.5	100.0	115.6	122.9
March	107.3	102.5	147.7	122.8	123.8	100.0	116.0	123.3
April	108.3	103.1	146.3	122.5	124.2	100.0	116.0	123.0
May	108.3	103.2	146.0	122.5	124.2	100.0	116.0	122.9
June	108.4	103.2	146.2	122.2	124.2	100.0	116.0	122.9
July	108.3	103.2	147.5	122.7	118.7	100.0	116.0	123.1
August	109.1	103.2	147.6	121.9	118.7	100.0	116.0	123.1
September	109.1	103.2	147.8	122.3	118.7	100.0	116.0	123.2
October	109.1	103.2	147.9	123.0	118.7	100.0	115.4	123.2
November	109.0	103.2	147.7	122.7	117.5	100.0	115.0	122.9
December	109.1	103.2	147.9	122.2	114.0	100.0	115.1	122.8
1943								
Average for year	109.5	102.7	153.7	124.6	114.4	100.0	114.0	124.3
January	109.1	103.2	147.9	122.5	114.0	100.0	114.2	122.5
February	109.0	103.2	149.4	123.3	114.0	100.0	114.2	123.0
March	109.1	103.2	149.4	124.5	114.0	100.0	114.0	123.2
April	109.1	103.2	149.5	124.8	114.0	100.0	113.5	123.1
May	109.3	102.8	150.5	124.5	114.0	100.0	113.5	123.3
June	109.4	102.5	151.3	124.2	114.0	100.0	113.6	123.4
July	109.4	102.5	152.2	124.2	114.0	100.0	113.2	123.6
August	109.4	102.5	157.6	125.2	114.0	100.0	113.3	125.2
September	109.4	102.5	158.4	125.0	113.7	100.0	114.0	125.6
October	109.4	102.5	158.8	125.2	113.7	100.0	114.2	125.8
November	110.5	102.5	159.7	125.7	115.8	100.0	114.2	126.2
December	110.5	102.5	159.8	125.8	115.8	100.0	114.9	126.6

Increased Shipping Costs During the War, and Their Effect on Prices of Imported Commodities[1]

WHEN the war broke out in Europe in 1939 its restrictive effect on trade was instantaneous and world-wide. All the markets of the world were immediately affected. The initial price advances, as in World War I, were greatest for commodities that are important in world trade. In American markets, prices of imports from abroad responded immediately and advanced generally throughout the first 4 months of the war, from September to December 1939. These advances were in anticipation of expected reductions in supply, caused not only by interference with production and the cutting off of normal sources from the belligerent nations but also by the higher costs of shipping.

The belligerent countries quickly converted their merchant shipping to war purposes, and the resultant scarcity of shipping for ordinary international commerce caused substantial increases in shipping costs. An analysis of the effect of shipping costs as a factor in the price rise in the early months of the present World War has been made by the Bureau of Labor Statistics, and the results are summarized briefly below, with particular emphasis upon the higher costs of war-risk insurance and of freight rates, as they affected principal imports to this country.

Table 1 shows the rapid rise in American markets of prices of leading imported commodities from July 1939 to mid-1940. By December, when prices in American markets in general had reached their peak, prices of jute, burlap, and shellac were approximately double their pre-war levels; those of silk and wool increased by 50 to 60 percent; and those of black pepper, cacao beans, copra, and rubber by 25 to 35 percent. On the other hand, prices of coffee, sugar, and sodium nitrate, imported from Central and South American countries, had risen scarcely at all, and opium, controlled by the Treasury, was unchanged. To be sure, prices of sugar had gone up during a speculative flurry in the markets in September, and for that month averaged 27 percent higher; subsequently they receded.

The price rise in imported commodities was, of course, much greater than in prices for domestic products. For example, the prices of textile products as a group in American wholesale markets increased 15 percent, whereas prices of imported textile products rose by 50 to 100 percent.

During the first half of 1940, prices of most imports declined somewhat, reflecting a lessening of the tension which had prevailed during the early months of the war, and a more realistic view of the immediate supply situation.

The effect of increased shipping costs upon the prices of imports in American markets was immediate and substantial, both in the rise up to December 1939, immediately following the outbreak of the war, and in their decline in 1940.

[1] Prepared in the Bureau's Division of Historical Studies of Wartime Problems by Edmund Nash.

TABLE 1.—*Wartime Rise in Prices of Specified Imported Commodities at Wholesale*

Commodity	Index numbers of wholesale prices (July 1939=100)										
	1939					1940					
	August	September	October	November	December	January	February	March	April	May	June
Foods:											
Cacao beans	99.7	145.9	123.2	120.8	135.2	130.1	125.1	129.9	138.4	125.3	114.9
Coffee (Brazil)	100.0	101.8	102.1	105.0	101.1	106.7	109.6	108.2	107.1	102.1	102.1
Pepper (black)	101.5	145.1	124.1	121.1	133.8	126.3	124.1	127.1	124.1	118.0	111.3
Sugar	98.7	126.9	116.9	103.9	102.1	98.4	98.4	97.3	97.9	96.6	93.4
Tea	124.9	117.8	116.3	124.9	124.9	124.9	124.9	124.9	122.8	105.3	110.6
Chemicals and allied products:											
Coconut oil	93.6	132.1	131.1	122.8	118.9	115.4	109.3	105.8	106.1	102.2	97.1
Copra	96.9	143.1	142.0	133.0	128.8	125.0	118.4	114.6	114.9	117.7	105.2
Opium	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Quebracho extract	100.0	100.0	109.5	111.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5
Quinine sulphate	100.0	101.3	106.6	110.2	111.5	111.5	111.5	110.8	109.8	110.8	111.5
Sodium nitrate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Textile products:											
Burlap	98.7	134.3	172.6	198.8	190.1	169.0	141.1	131.0	133.8	144.1	137.5
Jute	92.4	91.1	120.5	163.4	213.7	193.9	175.5	182.7	148.2	.....	137.6
Silk (yellow)	97.3	109.8	118.6	125.4	150.1	139.1	115.6	112.7	101.7	105.4	104.2
Wool (Australia)	100.7	144.2	166.7	159.5	156.7	153.9	153.9	153.9	153.9	153.9	153.9
Metals:											
Tin	100.3	139.9	115.6	109.0	105.2	96.6	95.4	97.0	96.6	107.0	111.4
Vanadium ore	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Miscellaneous:											
Shellac	100.0	145.8	174.6	174.6	197.7	201.5	161.9	164.2	145.8	138.8	142.8
Rubber	100.6	139.3	124.6	123.8	123.8	115.5	113.2	112.0	115.2	129.3	135.8

War-risk insurance rates began to rise even before the actual outbreak of war, and by September 6, 1939, were from 4 to 16 times as great as in the preceding month. During the next 6 months they decreased slightly, but the fall of France and the threat of the German acquisition of military bases nearer the Atlantic routes forced the rates up again. Ocean freight rates were increased on the various routes by from 20 to 50 percent during September, the first month of hostilities. These increases resulted from increased danger to shipping, scarcity of vessels, and sharply rising wage levels for seamen. Other items enter into the cost of shipping, but insurance and freight account for by far the largest proportion.

Shipping Costs

Freight and war-risk insurance charges constitute the greater part of shipping costs. Other costs are relatively small. They include invoices and documents requiring consular stamps, fees of customhouse brokers, and ordinary marine-risk insurance which may occasionally run as high as one-half of 1 percent of cargo value on Far Eastern routes, but is usually much lower, especially on hemisphere routes.

Insurance.—War-risk insurance rates began their rise a few days before the actual outbreak of the war, and for most routes reached a peak by September 6, 1939, after which they fell slightly (table 2). Another high point occurred in June 1940, with the fall of France and the consequent acquisition by the Germans of new submarine and airplane bases nearer the Atlantic routes. The entrance of Italy into the war at that time forced up the rates on the Mediterranean route.

TABLE 2.—*War-Risk Insurance Rates on Chief Trade Routes, Selected Dates, August 1939–June 1940*

Route from United States to—	War-risk insurance rate as percent of cargo value, Allied ships [1]						
	Aug. 7, 1939	Aug. 29, 1939	Sept. 6, 1939	Sept. 27, 1939	Dec. 26, 1939	May 23, 1940	June 24, 1940
United Kingdom and Continent of Europe (Gibraltar to Malmo)	¼–⅜	1–2	3–6	6	6	[2] 4	[2] 7½
Mediterranean	⅜–½	2¾	5–8¼	5	4	5	[3]
Far East and Australasia, via Suez	⅜–½	2¾	8¼	6	5	5½	[3]
Far East and Australasia, via Panama or Transpacific	¼	½	2½–3	2½–3	1¼–2	¾	2
Africa, not via Mediterranean	¼	½	3	3	2½	1	4
North, Central, and South America	1/20	1/20	3	1	¾	¾	½

[1] Rates on United States ships were usually less than half of rates for Allied ships. Underwriters did not insure Axis vessels or vessels liable to Allied capture. (Source: New York Journal of Commerce, issues of Aug. 7, Sept. 1, 6, 15, 22, 28, 30, and Dec. 26, 1939; May 23 and June 24, 1940.)
[2] United Kingdom only.
[3] Quotations on applications only.

Freight rates.—Ocean freight rates rose immediately after the war broke out. Germany invaded Poland on the night of August 31. On September 1, freight rates were increased by 33⅓ percent on North Atlantic routes and, on September 7, by 50 percent on routes from South America to the United States Pacific Coast (except for coffee and Brazilian nuts).[2] On September 18, rates were increased 20 percent on routes from the American North Atlantic Coast to the Far East and Australia.[3] Eight days later, on September 26, the Japanese raw-silk freight pool announced a rise of 50 percent on shipments to American ports.[4] The 14 steamship lines operating between the eastern coast of the United States and Brazil and the River Plate agreed on September 27 to raise rates 20 percent within 2 to 3 months.[5] However, as a result of one of the resolutions adopted at the consultative meeting of the Foreign Ministers of the American Republics held in the city of Panama (September 23–October 3, 1939), the actual increase was only 10 percent.[6]

Back of these freight-rate advances lay scarcity and restriction of shipping. For the United States, shipping scarcity was created on some routes when the President barred American ships from their normal services by approving, on November 4, 1939, the amended Neutrality Act which permitted shipments of munitions to belligerents only on a "cash and carry" basis, and when he proclaimed western Europe—from southern France to southern Norway, including the United Kingdom—as a combat area. However the ships barred from these areas replaced British and other ships in South American trade and in the transportation of rubber from the Far East. Numerous American ships, moreover, were transferred to foreign registry in order to participate in world trade. British ships, released from the necessity of transporting rubber and other Far Eastern commodities, then began to carry American goods across the Atlantic.[7]

[2] Inter-American Maritime Conference, Washington, D. C., November 25, 1940, to December 2, 1940, Report of Delegates of the United States, 1941, p. 115.
[3] Conference rates on file at the U. S. Maritime Commission.
[4] Foreign Shipping News (U. S. Bureau of Foreign and Domestic Commerce), October 20, 1939.
[5] New York Journal of Commerce, September 9, 11, and 20, 1939.
[6] Inter-American Maritime Conference, Report of Delegates of the United States, pp. 115 and 120.
[7] U. S. Statutes at Large, vol. 54, pt. 2, ch. 2; Federal Register, vol. 4, p. 4495; U. S. Maritime Commission, Press releases 492 and 707; Inter-American Maritime Conference, Report of Delegates of the United States, p. 85.

Time-charter rates for ships are a barometer of trends in freight rates. When time-charter rates rise, freight rates tend to rise also. The scarcity of shipping increases the time-charter rates, since the owner of a ship finds more operators bidding for its use. In September 1939 time-charter rates for ships in inter-American trade were already 2¼ times the rates of August 1939 and by April 1940 had become nearly 4 times as high as those of August. They then began a gradual decline until July 1940, when they were approximately the same as in September 1939.[8] The time-charter rate peak in April, 1940, coincided with the German invasion of Denmark and Norway.

Another factor in raising freight rates was the advance in wage levels. The U. S. Maritime Commission on September 20, 1939, granted a 25-percent pay increase to American seamen on its vessels in the North Atlantic Trades, with guaranteed full pay for any time lost because of internment by any of the belligerents.[9] Thereupon private shipowners agreed with the National Maritime Union to grant emergency compensation of 25 percent over base pay.[10] By May 1940 the wages of seamen in noncombat areas had risen to 40 percent above the pre-war level; and seamen on Danish vessels sailing between Great Britain, France, Belgium, and the Netherlands, were receiving wage increases up to 350 percent.[11]

TABLE 3.—*Increases in Freight Rates on Specified Imported Commodities, Selected Dates During 1939 and 1940* [1]

Commodity	Route to United States from—	Freight rates per pound, July 1939	1939			1940		
			Peak month	Rate	Percent of increase over July 1939	First month of major change	Rate	Percent of increase over July 1939
Foods:		*Cents*		*Cents*			*Cents*	
Cacao beans	West Africa	0.52	Dec.	0.68	31	July	0.89	71
Coffee	Brazil	.45	do	.53	17	June	.64	42
Pepper (black)	Netherlands Indies	.60	Sept.	1.26	110	Aug	1.52	152
Sugar	Philippines	.30	Oct.	.54	78	July	.67	122
Tea	Japan	1.34	Sept.	1.56	17	do	1.79	33
Chemicals and allied products:								
Coconut oil	Philippines	.54	do	.64	20	June	.89	67
Copra	do	.49	do	.59	20	do	.83	68
Opium	Turkey	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Quebracho extract	Brazil	.68	Oct.	.91	33	July	.45	—33
Quinine sulphate	Netherlands Indies	7.01	Sept.	8.43	20	Aug.	10.13	44
Sodium nitrate	Chile	.22	(2)	(2)	(2)	Mar.	.33	50
Textile products:								
Burlap	British India	.51	Nov.	.91	78	July	1.14	122
Jute	do	.38	do	.74	93	do	.97	153
Silk	Japan	4.00	do	6.00	50	Sept.	6.00	50
Wool	Australia	2.64	(2)	(2)	(2)	Mar.	3.47	32
Metals:								
Tin	Netherlands Indies	1.10	Sept.	1.33	20	Aug.	1.60	44
Vanadium ore	Peru	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Miscellaneous:								
Shellac	British India	.70	Nov.	1.15	65	July	1.45	108
Rubber	Netherlands Indies	.66	Sept.	.79	19	Aug.	.94	43

[1] Based on data obtained from the freight tariffs on file with the U. S. Maritime Commission. Percentage increases are approximate.
[2] Data not available.

[8] Inter-American Maritime Conference, Report of Delegates of the United States, pp. 111 and 115.
[9] U. S. Maritime Commission, Press release No. 401.
[10] New York Journal of Commerce, September 22, 1939, p. 22.
[11] U. S. Department of Commerce. Trade Promotion Series No. 212: Wartime Control of Ocean Freight Rates in Foreign Trade [July 1940], p. 6.

The summary of freight rates on specified imported commodities for the period September 1939 through September 1940 (table 3) shows that freight rates by the end of 1939 had risen on all of these commodities. They rose still higher in the middle of 1940 after the fall of France, except for silk (which remained at the same level) and quebracho extract (which dropped 33 percent below the pre-war rate on July 1939). The rate increases by the middle of 1940 were generally lowest on South American routes and highest on Far Eastern routes, especially from the Netherland Indies, British India, and the Philippine Islands.

Prices of Imports in Relation to Shipping Costs

The rise in prices of leading imports in American markets, shown in table 1, was influenced by shipping costs in an important measure. Prices for 14 of 19 imports reached their early wartime peak in the first 4 months after war broke out. Tea reached its peak in August 1939; then, in September, cacao beans, black pepper, sugar, coconut oil (crude), tin, copra, and rubber; Australian wool in October; burlap in November; quebracho extract, quinine sulphate, jute, and silk (yellow) in December; shellac in January 1940, and finally coffee in February. Prices for three commodities did not rise; two of them, sodium nitrate and vanadium ore, came from South America and had to compete with domestic products. Opium, imported under the control of the Bureau of Narcotics of the Treasury Department, had accumulated under Treasury policy until there were reserve stocks in the United States sufficient for about 3 years under normal conditions of consumption.[12]

During the first half of 1940 most of the imported commodities for which prices had risen just after the outbreak of war again declined in price. This followed the general trend of American markets for domestic products, but it also reflected in an important measure the decline of war-risk insurance rates from their peak of September 6, 1939, the diversion of much European neutral shipping to world trade as a result of German invasions and the British blockade, and the fact that much United States coastwise shipping had been diverted to overseas duty. On May 14, 1940, the President approved a Joint Resolution of Congress removing the 1939 congressional ban on the sale or charter by the U. S. Maritime Commission of vessels from its laid-up fleet of 116 vessels.[13] After 5 months of war, moreover, there was a relaxation of tension and some lessening of trade uncertainties; these factors, together with representations from American importers to foreign exporters, undoubtedly eased the general price rises.

Shipping costs were clearly important in stimulating the rise in the wholesale prices of 13 of the most important American imports, as shown in table 4. These costs accounted for 50 percent or more of the increase in the wholesale price of coffee, pepper, and quinine sulphate, and for about 10 percent of the increase in burlap, jute, silk, tin, shellac, and rubber.

[12] War and Its Effect on United States Imports (U. S. Tariff Commission), [1940], pp. 32, 39, and 104.
[13] Public Resolution No. 74; Hearings before the committee on Merchant Marine and Fisheries, House of Representatives, August 1, 1940.

For quinine sulphate the wholesale price quoted in August was 61 cents per ounce. In October, the quotation was 65 cents, or 4 cents more. The added 4 cents was exactly the amount of surcharge announced by wholesale dealers as caused by increased shipping costs and war expenses. When this surcharge dropped to 3 cents per ounce in March and April the wholesale price likewise dropped a cent. By June, with the surcharge again 4 cents, the wholesale price had risen to 68 cents,[14] the additional 3-cent rise being caused by other factors.

The unusual rise in the wholesale prices of shellac, jute, and burlap—three imports the prices of which rose out of proportion to the increase in shipping costs—was due to increased selling prices asked by producers and manufacturers in India. By November 1939, the price situation had become such that American importers and prominent users of burlap were reported to have "appealed to manufacturers in Calcutta, and to British authorities as well, to restrain quotations from rising to the point where large-scale use of substitutes will be encouraged."[15] Cotton had already begun to replace burlap in the manufacture of sandbags. As a result of the appeal, burlap and jute prices dropped.[16]

The analysis in table 4 is based on rough calculations from actual wholesale prices, because of the impracticability of adapting to a common period of time the constantly varying and different costs of so many commodities coming in from various parts of the world under quite dissimilar conditions. Since all of the specified commodities were in great demand, wholesalers' costs per unit pound were relatively small, because of the rapid turnover. The counterbalancing premium for ordinary marine insurance was also relatively small.

TABLE 4.—*Maximum Increases in Shipping Costs and in Wholesale Prices of Specified Imports, Year Ending June 1940*

Commodity	Wholesale price, July 1939 (cents per pound)	Maximum increase during year ending June 1940 of—		War-risk insurance		Maximum freight and war-risk insurance costs (cents per pound)	Increase in shipping cost as approximate percent of maximum increase in wholesale price
		Wholesale price (cents per pound)	Freight charges (cents per pound)	Maximum rate before June 1940 (percent of value)	Approximate premium (cents per pound)		
Foods:							
Cacao beans	4.31	1.97	0.16	3	0.19	0.35	18
Coffee	5.13	.80	.08	3	.17	.25	50
Pepper	3.40	1.55	.66	3	.15	.81	52
Tea	28.00	7.00	.22	3	1.05	1.27	18
Chemicals and drugs:							
Coconut oil	3.03	.97	.10	3	.12	.22	23
Copra	1.67	.66	.10	3	.07	.17	26
Quinine sulphate	[1] 61.00	[1] 7.00	[1] .09	6	[1] 4.08	[1] 4.17	59
Textile products:							
Burlap	5.56	5.49	.40	3	.33	.73	13
Jute	4.72	5.37	.36	3	.30	.66	12
Silk	233.88	127.00	2.00	3	11.43	13.43	11
Miscellaneous:							
Tin	48.59	19.41	.23	3	2.04	2.27	12
Shellac	9.75	9.85	.45	3	.59	1.04	11
Rubber	16.59	6.54	.13	3	.69	.82	13

[1] Per ounce.

[14] Oil, Drug, and Paint Reporter, October 2, 1939, and subsequent issues.
[15] New York Journal of Commerce, Nov. 22, 1939.
[16] Idem, Nov. 25, 1939.

Wholesale Prices in January 1944

THE Bureau of Labor Statistics index of commodity prices in primary markets [1] rose 0.1 percent during January, to the highest level in the past 7 months. Continued advances in prices for bituminous coal and coke, a 5-percent increase allowed by OPA in prices for household furniture, together with stronger grain and livestock markets, largely accounted for the advance, which brought the all-commodity index to 103.3 percent of the 1926 level. Average prices for the 889 series included in the all-commodity index were nearly 1½ percent higher than in January 1943 and approximately 38 percent over the August 1939 level.

During the month, average prices for housefurnishing goods rose 1.7 percent; for hides and leather products and fuel and lighting materials, 0.2 percent; and for building materials, 0.1 percent. Prices for foods declined 0.7 percent and for metals and metal products and miscellaneous commodities, 0.1 percent during the month.

The general level of farm products prices in January 1944 remained unchanged from December 1943, at 121.8 percent of the 1926 average. Price increases of about 1 percent for grains and livestock were counterbalanced by lower prices for eggs, hay, seeds, oats, cows, calves, wool, oranges, and onions. Rye advanced nearly 5 percent and wheat and barley about 1½ percent. In the livestock markets, steers rose 0.4 percent; hogs, 1.2 percent; live poultry at Chicago, 3.6 percent; and sheep, 8 percent. In addition, prices were higher for cotton, tobacco, apples, lemons, and potatoes. Average prices for farm products, which rose 4 percent in the past 12 months, are 100 percent higher than before the war.

Seasonal declines for fruits and vegetables and for eggs brought average prices for foods in primary markets down 0.7 percent during January, to the lowest level in over a year. Higher prices were reported for fresh pork, oatmeal, rye flour, and cottonseed oil. The index for foods was 0.3 percent lower than in January of last year.

In the hides and leather products group, a minor decline for shearlings was more than offset by higher prices for imported goatskins, and the index for the group advanced 0.2 percent.

The textile markets were steady during the month.

Further advances in prices for coal and coke, granted by OPA to operators in some areas to cover higher production costs, together with increased prices for kerosene, caused average prices for fuel and lighting materials to rise 0.2 percent.

A sharp decline in prices for quicksilver, resulting from heavy stocks, accounted for a decline of 0.1 percent in the metals and metal products group index. Quotations for several farm machinery items were fractionally higher.

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[1] The Bureau of Labor Statistics wholesale price data for the most part represent prices prevailing in the "first commercial transaction." They are prices quoted in primary markets, at principal distribution points.

Average prices for building materials rose 0.1 percent because of increased prices for brick in some areas, for certain types of Ponderosa pine, Douglas fir, oak, and gum lumber, and for tar and paint materials, such as rosin, turpentine, and butyl acetate. Lower prices were reported for Idaho and sugar pine lumber.

No changes were reported in the chemicals and allied products priced by the Bureau during January.

The index for the housefurnishing goods group rose 1.7 percent as a result of a 5-percent increase permitted by OPA on prices for wooden household furniture.

Minor reductions for packaged soap products and rubber heels accounted for a decline of 0.1 percent in the miscellaneous commodities group index.

Prices for most commodities in primary markets moved within a fairly narrow range during the past 12 months. Outstanding increases were 21 percent for grains, 15 percent for fruits and vegetables, 12 percent for cattle feed, 8 percent for lumber, about 7 percent for coal, and 6 percent for paper and pulp.

Prices for nearly all commodities were much higher in January 1944 than before the war. Farm products were 100 percent above the August 1939 level, largely because of increases of 151 percent for grains and 83 percent for livestock and poultry. Foods were 56 percent higher than before the war, with fruits and vegetables up 102 percent, dairy products 63 percent, meats 44 percent, and cereal products 32 percent. In the more than 4 years of war, prices for textile products advanced 44 percent, mainly as a result of increases of 72 percent for cotton goods and 49 percent for woolen and worsted goods. Advances of 151 percent for industrial fats and oils and 114 percent for drugs and pharmaceuticals were responsible for most of the 35-percent increase in the chemicals and allied products group index. Since August 1939, hides and leather products, building materials, and miscellaneous commodities have advanced more than 26 percent, housefurnishing goods, 22 percent; fuel and lighting materials, 13 percent; and metals and metal products, 11 percent.

Average prices for raw materials in January were nearly 69 percent over their prewar level, while semimanufactured articles and finished products advanced 25 percent.

Percentage comparisons of the January 1944 level of wholesale prices with December and January 1943, and August 1939, with corresponding index numbers, are given in table 1.

TABLE 1.—*Index Numbers of Wholesale Prices by Groups and Subgroups of Commodities, January 1944, With Comparisons for December 1943, January 1943, and August 1939*

[1926=100]

Group and subgroup	January 1944	December 1943	Percent of change	January 1943	Percent of change	August 1939	Percent of increase
All commodities	103.3	103.2	+0.1	101.9	+1.4	75.0	37.7
Farm products	121.8	121.8	0	117.0	+4.1	61.0	99.7
Grains	129.5	128.2	+1.0	107.3	+20.7	51.5	151.5
Livestock and poultry	120.8	119.5	+1.1	129.2	−6.5	66.0	83.0
Other farm products	119.5	120.6	−.9	111.5	+7.2	60.1	98.8
Foods	104.9	105.6	−.7	105.2	−.3	67.2	56.1
Dairy products	110.6	110.6	0	113.4	−2.5	67.9	62.9
Cereal products	95.1	95.1	0	90.6	+5.0	71.9	32.3
Fruits and vegetables	118.4	119.3	−.8	102.6	+15.4	58.5	102.4
Meats	106.0	105.9	−.1	115.5	−8.2	73.7	43.8
Other foods	96.1	98.5	−2.4	96.2	−.1	60.3	59.4
Hides and leather products	117.2	117.0	+.2	117.8	−.5	92.7	26.4
Shoes	126.4	126.4	0	126.4	0	100.8	25.4
Hides and skins	112.9	111.6	+1.2	116.0	−2.7	77.2	46.2
Leather	101.3	101.3	0	101.3	0	84.0	20.6
Other leather products	115.2	115.2	0	115.2	0	97.1	18.6
Textile products	97.7	97.7	0	97.3	+.4	67.8	44.1
Clothing	107.0	107.0	0	107.0	0	81.5	31.3
Cotton goods	112.9	112.9	0	112.5	+.4	65.5	72.4
Hosiery and underwear	71.7	71.7	0	70.5	+1.7	61.5	16.6
Rayon	30.3	30.3	0	30.3	0	26.5	6.3
Silk	(1)	(1)		(1)		44.3	
Woolen and worsted goods	112.5	112.5	0	112.4	+.1	75.5	49.0
Other textile products	100.5	100.5	0	97.7	+2.9	63.7	57.8
Fuel and lighting materials	82.3	82.1	+.2	79.3	+3.8	72.6	13.4
Anthracite	95.0	95.0	0	88.5	+7.3	72.1	31.8
Bituminous coal	119.8	118.8	+.8	112.5	+6.5	96.0	24.8
Coke	126.2	124.5	+1.4	122.1	+3.4	104.2	21.1
Electricity	(1)	(1)		62.6		75.8	
Gas	(1)	77.0		73.2		86.7	
Petroleum and products	63.5	63.5	0	60.8	+4.4	51.7	22.8
Metals and metal products	103.7	103.8	−.1	103.8	−.1	93.2	11.3
Agricultural implements	97.0	96.9	+.1	96.9	+.1	93.5	3.7
Farm machinery	98.1	98.1	0	98.0	+.1	94.7	3.6
Iron and steel	97.1	97.1	0	97.2	−.1	95.1	2.1
Motor vehicles	112.8	112.8	0	112.8	0	92.5	21.9
Nonferrous metals	85.9	86.0	−.1	86.0	−.1	74.6	15.1
Plumbing and heating	91.8	91.8	0	90.4	+1.5	79.3	15.8
Building materials	113.5	113.4	+.1	109.8	+3.4	89.6	26.7
Brick and tile	100.2	100.0	+.2	98.7	+1.5	90.5	10.7
Cement	93.6	93.6	0	94.2	−.6	91.3	2.5
Lumber	144.1	144.0	+.1	133.3	+8.1	90.1	59.9
Paint and paint materials	103.5	103.3	+.2	100.6	+2.9	82.1	26.1
Plumbing and heating	91.8	91.8	0	90.4	+1.5	79.3	15.8
Structural steel	107.3	107.3	0	107.3	0	107.3	0
Other building materials	102.8	102.8	0	102.2	+.6	89.5	14.9
Chemicals and allied products	100.4	100.4	0	100.2	+.2	74.2	35.3
Chemicals	96.3	96.3	0	96.9	−.6	83.8	14.9
Drugs and pharmaceuticals	165.2	165.2	0	165.4	−.1	77.1	114.3
Fertilizer materials	81.3	81.3	0	79.0	+2.9	65.5	24.1
Mixed fertilizers	86.5	86.5	0	85.3	+1.4	73.1	18.3
Oils and fats	102.0	102.0	0	101.5	+.5	40.6	151.2
Housefurnishing goods	104.5	102.8	+1.7	102.5	+2.0	85.6	22.1
Furnishings	107.1	107.1	0	107.3	−.2	90.0	19.0
Furniture	102.0	98.4	+3.7	97.4	+4.7	81.1	25.8
Miscellaneous	93.2	93.3	−.1	90.7	+2.8	73.3	27.1
Automobile tires and tubes	73.0	73.0	0	73.0	0	60.5	20.7
Cattle feed	159.6	159.6	0	142.8	+11.8	68.4	133.3
Paper and pulp	106.0	106.0	0	100.1	+5.9	80.0	32.5
Rubber, crude	46.2	46.2	0	46.3	−.2	34.9	32.4
Other miscellaneous	96.7	96.7	0	94.9	+1.9	81.3	18.9
Raw materials	112.2	112.1	+.1	108.2	+3.7	66.5	68.7
Semimanufactured articles	93.2	93.1	+.1	92.8	+.4	74.5	25.1
Manufactured products	100.2	100.2	0	100.1	+.1	79.1	26.7
All commodities other than farm products	99.1	99.0	+.1	98.5	+.6	77.9	27.2
All commodities other than farm products and foods	97.8	97.6	+.2	96.0	+1.9	80.1	22.1

[1] Data not available.

Index Numbers by Commodity Groups, 1926 to January 1944

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1943, and by months from January 1943 to January 1944, are shown in table 2.

TABLE 2.—*Index Numbers of Wholesale Prices by Groups of Commodities*

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1934	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	80.8
1937	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	77.1
1940	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
1941	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.6	94.3	82.0	87.3
1942	105.9	99.6	117.7	96.9	78.5	103.8	110.2	97.1	102.4	89.7	98.8
1943	122.6	106.6	117.5	97.4	80.8	103.8	111.4	100.3	102.7	92.2	103.1
1943											
January	117.0	105.2	117.8	97.3	79.3	103.8	109.8	100.2	102.5	90.7	101.9
February	119.0	105.8	117.8	97.3	79.8	103.8	110.2	100.3	102.6	90.9	102.5
March	122.8	107.4	117.8	97.3	80.3	103.8	110.4	100.0	102.6	91.4	103.4
April	123.9	108.4	117.8	97.4	80.6	103.8	110.3	100.1	102.6	91.6	103.7
May	125.7	110.5	117.8	97.4	80.8	103.8	110.5	100.2	102.7	91.9	104.1
June	126.2	109.6	117.8	97.4	81.0	103.8	110.6	100.0	102.8	91.8	103.8
July	125.0	107.2	117.8	97.4	81.0	103.7	110.7	100.1	102.6	92.3	103.2
August	123.5	105.8	117.8	97.4	80.9	103.7	112.2	100.2	102.6	92.6	103.1
September	123.1	105.0	117.8	97.5	81.0	103.7	112.5	100.3	102.6	93.0	103.1
October	122.2	105.1	117.8	97.6	81.0	103.7	112.7	100.4	102.6	93.1	103.0
November	121.4	105.8	116.5	97.7	81.2	103.8	113.1	100.3	102.8	93.2	102.9
December	121.8	105.6	117.0	97.7	82.1	103.8	113.4	100.4	102.8	93.3	103.2
1944											
January	121.8	104.9	117.2	97.7	82.3	103.7	113.5	100.4	104.5	93.2	103.3

The price trend for specified years and months since 1926 is shown in table 3 for the following groups of commodities: Raw materials, semimanufactured articles, manufactured products, commodities other than farm products, and commodities other than farm products and foods. The list of commodities included under the classifications "Raw materials," "Semimanufactured articles," and "Manufactured products" was shown on pages 8 and 9 of Wholesale Prices, July–December and Year 1942 (Bulletin No. 736).

TABLE 3.—*Index Numbers of Wholesale Prices by Special Groups of Commodities*

[1926=100]

Year and month	Raw materials	Semimanufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods	Year and month	Raw materials	Semimanufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
						1943					
1926	100.0	100.0	100.0	100.0	100.0	Jan.	108.2	92.8	100.1	98.5	98.0
1929	97.5	93.9	94.5	93.3	91.6	Feb.	109.6	92.9	100.3	98.7	98.2
1932	55.1	59.3	70.3	68.3	70.2	Mar.	112.0	93.0	100.5	99.0	98.3
1933	56.5	65.4	70.5	69.0	71.2	Apr.	112.8	93.1	100.6	99.1	98.6
1936	79.9	75.9	82.0	80.7	79.6	May	114.0	93.0	100.7	99.2	98.7
1937	84.8	85.3	87.2	86.2	85.3	June	114.3	92.8	100.1	98.7	98.0
1939	70.2	77.0	80.4	79.5	81.3	July	113.6	92.8	99.6	98.3	98.0
1940	71.9	79.1	81.6	80.8	83.0	Aug.	112.7	92.9	99.7	98.5	97.1
1941	83.5	86.9	89.1	88.3	89.0	Sept.	112.4	92.9	99.9	98.6	97.2
1942	100.6	92.6	98.6	97.0	95.5	Oct.	111.9	92.9	100.0	98.7	97.3
1943	112.1	92.9	100.1	98.7	96.9	Nov.	111.3	92.9	100.2	98.8	97.4
						Dec.	112.1	93.1	100.2	99.0	97.6
						1944					
						Jan.	112.2	93.2	100.2	99.1	97.5

Weekly Fluctuations

Weekly changes in wholesale prices by groups of commodities during December 1943 and January 1944 are shown by the index numbers in table 4. These indexes are not averaged to obtain an index for the month but are computed only to indicate the fluctuations from week to week.

TABLE 4.—*Weekly Index Numbers of Wholesale Prices by Commodity Groups, December 1943 and January 1944*

[1926=100]

Commodity group	Jan. 29	Jan. 22	Jan. 15	Jan. 8	Jan. 1	Dec. 25	Dec. 18	Dec. 11	Dec. 4
All commodities	103.1	103.0	103.0	102.9	103.0	102.9	102.9	102.9	102.8
Farm products	122.6	121.9	122.1	121.9	122.1	122.0	121.8	122.0	121.8
Foods	104.7	104.6	104.8	104.6	105.1	105.7	105.7	105.9	105.6
Hides and leather products	117.8	117.9	117.9	117.9	117.9	117.9	117.9	117.5	117.5
Textile products	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2
Fuel and lighting materials	83.1	82.8	82.7	82.6	82.6	82.6	82.6	82.4	82.1
Metals and metal products	103.8	103.8	103.8	103.9	103.9	103.9	103.9	103.9	103.9
Building materials	113.5	113.4	113.4	113.4	113.5	113.5	113.4	113.4	113.1
Chemicals and allied products	100.4	100.4	100.4	100.3	100.3	100.3	100.3	100.3	100.4
Housefurnishing goods	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.2	104.2
Miscellaneous	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0
Raw materials	112.7	112.3	112.3	112.1	112.3	112.2	112.1	112.1	111.7
Semimanufactured articles	93.1	93.1	93.1	93.1	93.1	93.1	93.1	93.1	92.9
Manufactured products	100.4	100.4	100.4	100.4	100.3	100.4	100.4	100.4	100.4
All commodities other than farm products	99.0	98.9	98.9	98.9	98.9	98.9	98.9	98.8	98.7
All commodities other than farm products and foods	98.0	97.9	97.9	97.8	97.8	97.8	97.8	97.8	97.6

Labor Turnover

Labor Turnover in Manufacturing, Mining, and Public Utilities, December 1943

THE average accession rate in manufacturing industries continued to decline, reaching 5.10 per 100 employees in December, the lowest rate in either 1942 or 1943. This is the first month during the war that hirings were significantly below separations. The decline in accessions together with increased lay-off rates resulted in a drop in employment in various war production industries.

The lay-off rate averaged 0.94 per 100 employees, nearly twice the rate prevailing in earlier months of the year. Accessions were lower, but there were more lay-offs. The quit rate for all manufacturing declined to 4.28 per 100 employees.

Five of the major manufacturing groups had a lay-off rate above 1 per 100 employees. The chemicals group had the highest lay-off rate, 4.50 per 100 employees. This reflects further cut-backs and cancelations of contracts in the small-arms ammunition industry. The lay-off rate for this industry alone (which has accumulated extremely large stock piles) is 13.65 per 100 employees.

The quit rates for women are still considerably higher than for men in each of the groups and industries for which turnover data for women are compared with those for men. The data on women indicate even more strikingly than do the data for men that separations other than quits are becoming increasingly important. For example, the small-arms ammunition industry, which has been cutting back production for some time, has had 12 men out of 100 leave the industry for reasons other than quits as compared with 18 women.

The separation rates in both of the coal-mining industries and in the iron-ore and lead- and zinc-ore mining industries were below the rate for all manufacturing. The separation rate for copper-ore mining was only slightly higher than that for all manufacturing, but the rate for miscellaneous metal mining was more than twice the rate for all manufacturing. The usual increase in separations in the winter months coupled with the large number of lay-offs following in the wake of cut-backs in the mining of bauxite and other aluminum ores, account for the separation rate of 13.65 per 100 employees in miscellaneous metal mining.

TABLE 1.—*Monthly Labor Turnover Rates (Per 100 Employees) in Manufacturing Industries* [1]

Class of turnover and year	January	February	March	April	May	June	July	August	September	October	November	December
Total separation:												
1943	7.11	7.04	7.69	7.54	6.57	7.07	7.56	8.18	8.16	7.02	6.37	[2] 6.20
1942	5.10	4.82	5.36	6.12	6.54	6.46	6.73	7.06	8.10	7.91	7.09	6.27
1939	3.19	2.61	3.18	3.46	3.48	3.31	3.36	3.01	2.79	2.91	2.95	3.46
Quit:												
1943	4.45	4.65	5.36	5.41	4.81	5.20	5.61	6.30	6.29	5.19	4.46	[2] 4.32
1942	2.36	2.41	3.02	3.59	3.77	3.85	4.02	4.31	5.19	4.65	4.21	3.71
1939	.85	.64	.82	.76	.68	.73	.70	.82	1.07	.93	.83	.95
Discharge:												
1943	.52	.50	.57	.53	.55	.61	.68	.67	.62	.64	.63	[2] .59
1942	.30	.29	.33	.35	.38	.38	.43	.42	.44	.45	.43	.46
1939	.10	.10	.13	.10	.13	.12	.12	.14	.14	.17	.15	.12
Lay-off: [3]												
1943	.74	.54	.52	.64	.45	.50	.50	.46	.53	.51	.69	[2] .94
1942	1.61	1.39	1.19	1.31	1.43	1.21	1.05	.87	.68	.78	.65	.70
1939	2.24	1.87	2.23	2.60	2.67	2.46	2.54	2.05	1.58	1.81	1.97	2.46
Military:												
1943	1.26	1.23	1.12	.87	.69	.69	.69	.67	.64	.61	.52	[2] .30
1942	.67	.56	.63	.68	.68	.78	.93	1.13	1.48	1.71	1.55	1.20
Miscellaneous: [4]												
1943	.14	.12	.12	.09	.07	.07	.08	.08	.08	.07	.07	[2] .05
1942	.16	.17	.19	.19	.28	.24	.30	.33	.31	.32	.25	.21
Accession:												
1943	8.28	7.87	8.32	7.43	7.18	8.40	7.83	7.62	7.73	7.17	6.62	[2] 5.10
1942	6.87	6.02	6.99	7.12	7.29	8.25	8.28	7.90	9.15	8.69	8.14	6.92
1939	4.09	3.06	3.34	2.93	3.29	3.92	4.16	5.06	6.17	5.80	4.10	2.86

[1] Turnover rates are not comparable to the employment and pay-roll reports issued monthly by the Bureau of Labor Statistics as the former are based on data for the entire month, while the latter refer only to pay periods ending nearest the middle of the month. In addition, labor turnover data beginning in January 1943 refer to all employees, whereas the data for previous years and the employment and pay-roll reports relate only to wage earners. Certain seasonal industries, such as canning and preserving, are not covered by the labor turnover survey and the sample is not as extensive as that of the employment survey, which includes a larger number of small plants.

[2] Preliminary figure.

[3] Including temporary, indeterminate, and permanent lay-offs.

[4] Data for 1939 included with quits.

TABLE 2.—*Monthly Turnover Rates in Selected Groups and Industries, December 1943*

Industry	Monthly turnover rate per 100 employees									
	Total separation		Quit		Discharge	Lay-off	Military and miscellaneous	Total accessions		
	December [1]	November	December [1]	November	December [1]	December [1]	December [1]	December [1]	November	
Manufacturing										
Iron and steel and their products	4.57	4.71	2.88	3.18	0.39	0.63	0.67	3.43	4.62	
Blast furnaces, steel works, and rolling mills	3.46	3.63	2.24	2.38	.15	.38	.69	2.34	2.13	
Gray-iron castings	7.63	7.11	5.36	5.06	.86	.72	.69	6.78	8.10	
Malleable-iron castings	5.57	5.53	4.54	4.39	.46	.08	.49	5.42	5.65	
Steel castings	5.81	6.51	4.26	4.88	.58	.20	.77	5.55	6.65	
Cast-iron pipe and fittings	4.34	5.52	1.93	2.94	.29	1.12	1.00	1.81	2.99	
Tin cans and other tinware	9.10	10.48	5.80	7.28	1.05	1.66	.59	8.25	9.77	
Wire products	2.39	2.36	1.60	1.49	.19	.21	.39	1.50	2.32	
Cutlery and edge tools	5.35	5.48	4.16	4.46	.72	.12	.35	4.57	6.28	
Tools (except edge tools, machine tools, files, and saws)	4.56	4.74	3.38	3.62	.54	.05	.59	6.11	6.09	
Hardware	3.93	3.86	3.04	2.86	.30	.13	.46	3.65	4.09	
Plumbers' supplies	3.88	4.41	2.50	2.63	.33	.05	1.00	2.25	3.18	
Stoves, oil burners, and heating equipment	6.93	7.68	4.88	4.72	1.01	.61	.43	6.77	10.46	
Steam and hot-water heating apparatus and steam fittings	4.54	4.30	3.14	2.99	.38	.16	.86	3.26	3.93	

See footnotes at end of table.

TABLE 2.—*Monthly Turnover Rates in Selected Groups and Industries, December 1943*—Continued

Industry	Monthly turnover rate per 100 employees								
	Total separation		Quit		Discharge	Layoff	Military and miscellaneous	Total accession	
	December [1]	November	December [1]	November	December [1]	December [1]	December [1]	December [1]	November
Manufacturing—Continued									
Iron and steel and their products—Con.									
Stamped and enameled ware and galvanizing	8.20	7.32	4.68	5.26	0.92	2.10	0.50	5.68	8.71
Fabricated structural metal products	6.38	6.80	4.14	4.48	1.20	.24	.80	7.49	8.69
Bolts, nuts, washers, and rivets	4.51	5.47	3.06	3.71	.57	.37	.51	3.79	6.11
Forgings, iron and steel	4.87	5.04	3.26	3.56	.52	.45	.64	3.95	5.50
Firearms, 60-caliber and under [2]	7.42	6.20	2.82	3.74	.77	3.27	.56	------	------
Machinery, except electrical	4.75	4.85	2.81	3.07	.56	.68	.70	3.83	4.75
Engines and turbines [2]	4.01	4.39	2.41	2.87	.70	.35	.55	------	------
Agricultural machinery and tractors	5.04	4.61	3.32	3.29	.33	.54	.85	6.52	6.04
Machine tools	4.84	4.40	1.99	2.01	.44	1.55	.86	1.70	1.90
Machine-tool accessories [2]	5.06	5.59	2.23	2.87	.70	1.36	.77	------	------
Metalworking machinery and equipment, not elsewhere classified [2]	4.51	4.19	2.23	2.45	.52	.98	.78	------	------
Textile machinery	5.21	4.48	3.18	3.51	.27	1.17	.59	4.24	5.28
General industrial machinery, except pumps	5.02	5.22	3.43	3.68	.63	.31	.65	4.39	5.56
Pumps and pumping equipment	3.67	4.76	2.36	3.39	.53	.20	.58	4.16	6.16
Automobiles	5.39	5.36	3.57	3.76	.72	.56	.64	5.52	6.27
Motor vehicles, bodies, and trailers	5.06	5.07	3.35	3.52	.48	.60	.63	5.35	5.42
Motor-vehicle parts and accessories	5.61	5.57	3.71	3.92	.89	.36	.65	5.63	6.83
Nonferrous metals and their products	6.47	7.38	4.28	5.13	.69	.82	.68	4.92	7.33
Primary smelting and refining, except aluminum and magnesium [2]	3.71	4.87	2.15	3.61	.44	.49	.63	------	------
Aluminum and magnesium smelting and refining [2]	10.44	11.22	6.73	8.18	1.16	1.45	1.10	------	------
Rolling and drawing of copper and copper alloys [2]	4.44	4.59	3.58	3.45	.28	.21	.37	------	------
Aluminum and magnesium products [2]	6.31	7.45	4.13	5.19	.68	.78	.72	------	------
Lighting equipment	4.97	6.11	3.10	4.41	.56	.78	.53	4.17	6.52
Nonferrous metal foundries, except aluminum and magnesium [2]	6.35	7.14	4.54	4.98	.82	.36	.63	------	------
Lumber and timber basic products	8.66	7.88	5.40	5.34	.42	2.22	.62	6.11	7.61
Sawmills	8.05	7.38	5.10	5.12	.32	1.95	.68	5.63	6.79
Planing and plywood mills	8.15	8.24	4.50	4.76	.59	2.53	.53	5.77	7.23
Furniture and finished lumber products	8.39	8.88	6.13	6.66	.80	1.02	.44	6.74	8.70
Furniture, including mattresses and bedsprings	8.80	9.04	6.52	6.79	.90	.94	.44	6.86	9.04
Stone, clay, and glass products	6.15	5.26	3.63	3.83	.41	1.43	.68	4.30	5.44
Glass and glass products	5.59	5.49	3.91	4.02	.56	.40	.72	5.27	6.37
Cement	7.65	6.53	2.17	3.72	.26	4.53	.69	3.47	3.32
Brick, tile, and terra cotta	6.11	5.49	4.36	4.44	.48	.86	.71	5.82	6.17
Pottery and related products	7.59	4.66	3.90	3.77	.37	2.86	.46	4.03	5.88
Electrical machinery	4.48	4.72	3.26	3.53	.52	.24	.46	4.01	5.42
Electrical equipment for industrial use [2]	3.72	4.30	2.61	3.10	.37	.25	.49	------	------
Radios, radio equipment, and phonographs [2]	5.37	5.44	4.12	4.06	.75	.08	.42	------	------
Communication equipment, except radios [2]	4.33	4.03	3.69	3.47	.28	.01	.35	------	------
Ordnance	6.71	6.90	3.83	3.90	.71	1.58	.59	5.69	7.31
Guns, howitzers, mortars, and related equipment [2]	6.02	5.66	3.42	3.45	.63	1.41	.56	------	------
Ammunition, except small-arms [2]	8.20	8.37	4.68	4.82	.83	2.07	.62	------	------
Tanks [2]	5.67	6.58	3.28	3.29	.64	1.06	.69	------	------
Fighting and fire-control equipment [2]	3.21	3.91	1.72	2.06	.44	.51	.54	------	------
Transportation equipment, except automobiles	6.76	6.78	4.56	4.50	.94	.63	.63	5.25	7.20
Aircraft [2]	5.48	5.95	3.89	4.22	.54	.55	.50	------	------
Aircraft parts [2]	4.82	5.21	2.98	3.42	.58	.76	.50	------	------
Shipbuilding and repairs [2]	8.91	8.31	6.01	5.35	1.48	.60	.82	------	------

See footnotes at end of table.

TABLE 2.—*Monthly Turnover Rates in Selected Groups and Industries, December 1943*—Continued

Industry	Monthly turnover rate per 100 employees								
	Total separation		Quit		Discharge	Layoff	Military and miscellaneous	Total accession	
	December [1]	November	December [1]	November	December [1]	December [1]	December [1]	December [1]	November
Manufacturing—Continued									
Textile-mill products	6.16	5.80	4.81	4.68	0.39	0.48	0.48	4.68	3.99
Cotton	7.16	6.41	5.76	5.28	.48	.39	.53	5.42	4.46
Silk and rayon goods	5.72	5.99	4.53	4.80	.38	.44	.37	4.25	5.03
Woolen and worsted, except dyeing and finishing	4.01	4.28	2.70	3.01	.20	.64	.47	3.26	4.06
Hosiery, full-fashioned	3.94	3.86	3.05	3.17	.20	.29	.40	2.91	4.31
Hosiery, seamless	6.28	6.19	5.00	5.20	.32	.56	.40	4.03	5.30
Knitted underwear	7.60	6.47	5.58	5.91	.34	1.41	.27	4.79	7.21
Dyeing and finishing textiles, including woolen and worsted	5.00	4.42	3.62	3.27	.45	.28	.65	4.67	5.31
Apparel and other finished textile products	5.89	5.94	4.69	4.84	.23	.82	.15	4.67	5.78
Men's and boys' suits, coats, and overcoats	4.94	4.75	2.92	3.53	.12	1.75	.15	3.72	3.35
Men's and boys' furnishings, work clothing, and allied garments	5.93	5.90	5.18	5.17	.24	.37	.14	4.11	5.84
Women's clothing, except corsets	5.74	6.59	5.08	4.86	.09	.46	.11	5.90	5.09
Leather and leather products	4.73	5.24	3.65	4.26	.22	.42	.44	3.94	5.03
Leather	2.99	4.71	2.14	3.64	.15	.26	.44	4.03	3.61
Boots and shoes	5.05	5.31	3.96	4.36	.21	.44	.44	3.91	5.28
Food and kindred products	9.78	9.72	7.41	7.51	.79	.85	.73	10.38	12.86
Meat products	10.46	10.20	7.71	7.62	.99	.94	.82	12.87	15.75
Grain-mill products	9.27	9.86	7.26	7.57	.92	.44	.65	9.69	10.72
Paper and allied products	7.00	6.85	5.08	5.33	.53	.81	.58	6.26	7.86
Paper and pulp	6.21	6.15	4.78	4.73	.47	.32	.64	5.79	7.07
Paper boxes	9.92	9.11	6.35	7.05	.49	2.60	.48	8.82	10.33
Chemicals and allied products	8.81	7.42	3.28	3.84	.48	4.50	.55	2.19	3.77
Paints, varnishes, and colors	3.99	4.46	2.68	2.98	.53	.34	.44	4.53	5.46
Rayon and allied products	3.34	3.33	2.54	2.34	.33	.16	.31	3.13	3.23
Industrial chemicals, except explosives	3.77	4.47	2.24	3.12	.48	.48	.57	3.41	4.37
Explosives [2]	3.88	5.63	2.32	3.17	.24	.81	.51	.....	.....
Small-arms ammunition [2]	19.60	12.06	4.62	4.84	.63	13.65	.70	.....	.....
Products of petroleum and coal	3.05	3.06	1.90	2.09	.29	.19	.67	2.92	3.84
Petroleum refining	2.85	2.77	1.76	1.86	.23	.19	.67	2.73	3.40
Rubber products	6.04	5.79	5.00	4.80	.41	.20	.43	5.93	7.13
Rubber tires and inner tubes	5.57	5.19	4.39	4.32	.41	.21	.56	5.19	6.62
Rubber footwear and related products	6.15	5.00	5.56	4.19	.26	.04	.29	6.94	6.33
Miscellaneous rubber industries	6.25	6.14	5.24	5.07	.42	.21	.38	6.18	7.32
Tobacco manufactures	6.25	6.64	5.48	5.87	.23	.22	.32	5.89	7.46
Miscellaneous industries	3.74	4.19	2.65	2.97	.34	.30	.45	3.37	5.03
Nonmanufacturing									
Metal mining:									
Iron ore	2.94	4.45	1.64	2.27	.14	.53	.63	2.30	2.32
Copper ore	6.89	5.14	5.47	3.99	.48	.48	.46	5.11	5.11
Lead and zinc ore	5.63	4.83	4.14	3.71	.53	.23	.73	5.61	5.78
Gold and silver ore	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Metal mining, not elsewhere classified (including aluminum ore)	13.20	9.33	5.16	6.22	1.21	5.95	.88	3.50	9.21
Coal mining:									
Anthracite	1.71	1.55	1.12	1.11	.12	.07	.40	1.62	1.91
Bituminous coal	2.93	2.82	2.15	2.16	.16	.14	.48	2.78	3.13
Public utilities:									
Telephone	2.57	2.81	2.17	2.33	.14	.09	.17	2.02	3.09
Telegraph	3.21	3.76	2.74	3.16	.11	.13	.23	3.70	3.62

[1] Data are preliminary.
[2] Publication of accession rates is restricted in these specific war industries.
[3] Not available.

TABLE 3.—*Monthly Turnover Rates for Men and Women in Selected Groups and Industries Engaged in War Production, December 1943* [1]

Industry	Monthly turnover rate per 100 employees [2]					
	Total separation		Quit		Total accession	
	Men	Women	Men	Women	Men	Women
Iron and steel and their products	4.07	7.75	2.51	5.24	3.16	5.20
Blast furnaces, steel works, and rolling mills	3.16	6.88	1.97	5.30	2.10	5.03
Gray-iron castings	7.58	8.40	5.30	6.31	6.65	8.73
Malleable-iron castings	5.49	6.31	4.51	4.82	5.39	5.67
Steel castings	5.80	5.74	4.19	5.04	5.64	4.59
Cast-iron pipe and fittings	4.16	7.04	1.89	2.60	1.79	1.99
Firearms, 60-caliber and under	5.63	11.15	2.04	4.44	2.79	3.98
Machinery, except electrical	4.29	6.66	2.32	4.87	3.44	5.42
Engines and turbines	3.75	5.15	2.04	4.01	4.36	7.48
Machine tools	4.46	6.95	1.62	4.01	1.36	3.60
Machine-tool accessories	4.68	6.31	1.87	3.47	2.05	2.44
Metalworking machinery and equipment, not elsewhere classified	4.16	6.46	1.95	3.77	1.97	3.38
General industrial machinery, except pumps	4.41	6.87	2.71	5.65	3.98	5.64
Pumps and pumping equipment	3.24	5.81	1.83	4.90	3.50	7.34
Nonferrous metals and their products	6.15	7.65	3.89	5.79	4.71	5.71
Primary smelting and refining, except aluminum and magnesium	3.36	9.97	1.85	7.51	3.03	8.16
Aluminum and magnesium smelting and refining	10.51	9.80	6.71	6.89	7.41	7.97
Rolling and drawing of copper and copper alloys	3.74	6.95	2.77	6.48	3.22	4.75
Aluminum and magnesium products	5.89	7.91	3.70	5.84	4.07	4.51
Nonferrous metal foundries, except aluminum and magnesium	5.75	7.84	3.87	6.18	6.18	9.29
Electrical machinery	3.10	5.75	1.72	4.66	2.88	5.04
Electrical equipment for industrial use	2.77	5.32	1.56	4.36	2.25	3.93
Radios, radio equipment, and phonographs	4.25	6.17	2.74	5.12	5.14	6.16
Communication equipment, except radios	2.92	5.58	2.81	4.46	3.61	5.47
Ordnance	5.68	8.66	2.85	5.69	5.00	7.01
Guns, howitzers, mortars, and related equipment	5.10	8.63	2.47	6.15	3.73	6.50
Ammunition, except small-arms	7.11	9.73	3.65	6.14	6.55	7.65
Tanks	5.31	6.96	2.55	5.94	5.82	10.23
Sighting and fire-control equipment	2.66	4.42	1.14	2.98	1.52	3.19
Transportation equipment, except automobiles	6.35	7.98	4.04	6.11	5.08	5.74
Aircraft	4.45	7.10	2.74	5.70	3.78	4.23
Aircraft parts	4.18	6.38	2.31	4.65	3.98	6.33
Shipbuilding and repairs	8.64	12.46	5.59	9.17	6.45	8.93
Chemicals and allied products	6.41	14.00	2.49	4.99	3.02	3.57
Industrial chemicals, except explosives	3.43	5.60	1.86	4.15	3.09	5.04
Explosives	2.79	5.88	1.26	4.25	1.94	2.55
Small-arms ammunition	15.65	23.89	3.52	5.82	1.71	2.54

[1] Data are preliminary.

[2] These figures are presented to show comparative turnover rates and should not be used to estimate employment.

Building Operations

Estimated New Construction Activity, 1942 and 1943

Summary

NEW construction activity in continental United States, declining steadily throughout 1943, reached the low level of 1.3 billion dollars for the fourth quarter. The total construction in the year was valued at approximately 7.5 billion dollars, or only 55.7 percent of the outlay of 13.5 billion dollars in 1942.

Although there was no real relaxation of wartime restrictions during the year, the volume of private construction held to higher levels in the last three quarters than seemed to be indicated by the low level of expenditures in the first quarter. The fourth-quarter total of 474 million dollars was only slightly below the preceding quarter. Outlays of approximately 1.8 billion dollars for the full year amounted to 56.1 percent of the 1942 total of 3.1 billion dollars.

The course of public construction was somewhat different from that of private construction. It declined steadily throughout the year as the scheduled military and naval and industrial facilities programs neared completion. Activity during each month of the year was less than in the preceding month, the sharpest decline coming in the last quarter. The 1943 outlay of approximately 5.8 billion dollars constituted 55.6 percent of the 1942 figure.

Private Construction

All types of privately financed construction registered fairly substantial declines from 1942. Nonfarm residential construction expenditures of 809 million dollars in 1943 were only 55.0 percent of 1942 expenditures. Outlays for nonresidential construction, after a decline which continued through 1942 and three-quarters of 1943, reversed in trend and showed an increase in the fourth quarter of 1943. The total of 181 million dollars for the year amounted to only one-third of expenditures in 1942. Expenditures for farm residential buildings are estimated at 98 million dollars for 1943 as compared with 185 million dollars in 1942, while farm service buildings are estimated to have cost 194 million dollars as against 315 million in 1942.

Public-utility expansion in 1943 is estimated to have cost 476 million dollars as compared with 621 million dollars in 1942.

Public Construction

Outlays for residential construction (war housing) financed from public funds amounted to 644 million dollars in 1943, or about 100 million dollars more than in 1942. Activity on this program, however,

was declining rapidly at the end of the year, and in the fourth quarter expenditures totaled only 100 million dollars. Expenditures for nonresidential buildings (not including industrial facilities) financed from public funds were only one-third of 1942 expenditures.

The industrial-facilities construction program declined rapidly throughout the year. Fourth-quarter expenditures dropped to 193 million dollars as compared with a peak of 1.1 billion dollars in the third quarter of 1942. Expenditures of 1.7 billion dollars in 1943 were less than half of the 1942 expenditures. The military and naval program had reached the stage where it consisted largely of the finishing of facilities already in place. Expenditures of 2.4 billion dollars for military and naval facilities in 1943 were likewise less than half of the figure for 1942. Highway expenditures followed the usual seasonal pattern, but at a considerably lower level than in recent years. Estimated outlays of 407 million dollars in 1943 were 271 million dollars less than in 1942.

All other Federal construction which included some war construction, such as Federally financed pipe lines and river and harbor work, showed expenditures of 422 million dollars in 1943 as against 401 million in 1942. State and local construction activity continued to decline throughout the year and the total of 107 million dollars was 56 million less than in 1942.

Estimated [1] *New Construction Activity in Continental United States, 1942 and 1943, by Quarter* [2]

Function and ownership	Estimated valuation (in millions of dollars) of new construction									
	1943					1942				
	Total	First quarter	Second quarter	Third quarter	Fourth quarter	Total	First quarter	Second quarter	Third quarter	Fourth quarter
Total new construction	7,526	2,290	2,118	1,807	1,311	13,508	2,498	3,424	4,286	3,300
Private construction	1,758	374	422	488	474	3,134	914	955	712	553
Residential (nonfarm)	809	143	190	242	234	1,471	478	476	283	234
Nonresidential	181	51	42	40	48	542	201	153	100	88
Farm:										
Residential	98	24	23	28	23	185	34	59	55	37
Service buildings	194	47	48	54	45	315	51	89	97	78
Public utility	476	109	119	124	124	621	150	178	177	116
Public construction	5,768	1,916	1,696	1,319	837	10,374	1,584	2,469	3,574	2,747
Residential (including war housing)	644	159	217	168	100	542	77	97	172	196
Nonresidential (excluding industrial facilities)	45	7	9	15	14	135	47	42	32	14
Industrial facilities	1,697	675	484	345	193	3,488	541	843	1,122	982
Military and naval (not including industrial facilities or war housing)	2,446	887	735	509	315	4,967	689	1,152	1,863	1,263
Highway	407	66	103	138	98	678	109	191	221	157
Other public:										
Federal [3]	422	93	117	116	96	401	77	95	125	104
State and local [4]	107	29	29	28	21	163	44	49	39	31

[1] Preliminary, subject to revision.
[2] The estimates include expenditures for major additions and alterations but not expenditures for work relief or maintenance.
[3] Includes conservation and development, TVA, and public pipe-line construction.
[4] Includes water supply, sewage disposal, and miscellaneous public-service enterprises.

Building Construction in Urban Areas, January 1944

BUILDING construction started in urban areas during January 1944 was valued at $85,962,000, or 16 percent less than the value of work started during December 1943. The total value of Federal contracts awarded, $31,984,000, was 24 percent below the total for December 1943, while permit valuations for private work declined one-tenth. New residential construction started during January was 22 percent less than during the previous month; new nonresidential construction, 14 percent; and additions, alterations, and repairs, 6 percent.

Valuations of all building construction started during January 1944 were 29 percent less than the total of $121,235,000 for January 1943. This decrease was due entirely to a 64-percent drop in Federal construction. Permit valuations for all classes of non-Federal building were 65 percent higher this January than last. As a result of the decline in the value of Federal construction contracts awarded, the valuations of new residential buildings declined 35 percent, and of new nonresidential buildings, 44 percent. Valuations for additions, alterations and repairs increased 68 percent. In January 1943, Federally financed contracts awarded were 73 percent of the value of all building construction started, while in January 1944 Federal awards were only 37 percent of the total.

Comparison of January 1944 With January and December 1943

The volume of Federally financed and other building construction in urban areas of the United States in January 1944 and January and December 1943 is summarized in table 1.

TABLE 1.—*Summary of Building Construction in All Urban Areas, January 1944*

Class of construction	Number of buildings			Valuation		
	January 1944	Percent of change from—		January 1944 (in thousands)	Percent of change from—	
		December 1943	January 1943		December 1943	January 1943
All building construction	36,720	−9.5	+3.5	$85,962	−15.8	−29.1
New residential	9,833	−22.9	−33.1	32,728	−22.0	−34.9
New nonresidential	3,352	−16.8	+14.9	33,437	−14.1	−43.5
Additions, alterations, and repairs	23,535	−1.1	+31.9	19,797	−6.4	+67.9

The number of new dwelling units in urban areas for which building permits were issued or Federal contracts awarded during January 1944 and the estimated valuation of such new housekeeping residential construction are presented in table 2.

TABLE 2.—*Number and Valuation of New Dwelling Units in All Urban Areas, by Type of Financing and Dwelling, January 1944*

Type of financing and dwelling	Number of dwelling units			Valuation		
	January 1944	Percent of change from—		January 1944 (in thousands)	Percent of change from—	
		December 1943	January 1943		December 1943	January 1943
All dwellings	11,130	−22.4	−47.1	$32,518	−22.3	−34.6
Privately financed	8,222	−2.8	+40.1	26,032	−6.9	+50.4
1-family	6,257	+2.0	+75.4	20,073	−5.2	+78.7
2-family [1]	977	−1.6	+8.8	3,074	+7.7	+25.2
Multifamily [2]	988	−26.1	−29.7	2,885	−26.9	−20.3
Federally financed	2,908	−50.5	−80.8	6,486	−53.2	−80.0

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.

Construction From Public Funds, January 1944

The value of contracts awarded and force-account work started during January 1944 and January and December 1943 on all construction projects and shipbuilding financed wholly or partially from Federal funds and reported to the Bureau of Labor Statistics is shown in table 3. This table includes all other types of construction as well as building construction, both inside and outside urban areas of the United States.

TABLE 3.—*Value of Contracts Awarded and Force-Account Work Started on Construction Projects and Shipbuilding Financed From Federal Funds, January 1944*

Source of funds	Contracts awarded and force-account work started (in thousands)		
	January 1944 [1]	December 1943 [2]	January 1943 [2]
Total	$155,286	$698,638	$338,484
War public works	2,683	3,974	2,259
Regular Federal appropriations	142,165	678,280	260,767
Federal Public Housing Authority	10,438	16,384	75,458

[1] Preliminary, subject to revision.
[2] Revised.

Coverage and Method

Figures on building construction in this report cover the entire urban area of the United States, which, by Census definition, includes all incorporated places with a 1940 population of 2,500 or more and, by special rule, a small number of unincorporated civil divisions. The volume of privately financed construction is estimated from the building-permit data received from a large majority of all urban places, and these estimates are combined with data on building construction contracts awarded as furnished by Federal and State agencies. The contracts awarded for Federally financed building construction in urban areas were valued at $31,984,000 in January 1944, $42,178,000 in December 1943, and $88,524,000 in January 1943.

The valuation figures represent estimates of construction costs made by prospective private builders when applying for permits to build, and the value of contracts awarded by the Federal and State governments. No land costs are included. Unless otherwise indicated, only building construction within the corporate limits of cities in the urban areas is included in the tabulations.

Trend of Employment, Earnings, and Hours

Summary of Reports for January 1944

THE total number of employees in nonagricultural establishments was 37,229,000 in January 1944—633,000 less than in January 1943. The decrease in employment between December and January is always large, and was only slightly greater this year than in earlier years. Employment in trade and in the post offices invariably declines after Christmas, as does employment in construction. The significant change from December to January was therefore not the decline in the total of about a million and a quarter, but rather the decline of nearly 280,000 in manufacturing. This was about 3½ times the average December-to-January movement. Manufacturing employment is now little greater than it was at the beginning of 1943.

Industrial and Business Employment

The number of wage earners in manufacturing industries declined for the second consecutive month. The January 1944 level is 13,630,000, which is 370,000 less than in November 1943. These declines reflect cut-backs in certain munitions industries, the return to a pre-war seasonal pattern in other munitions industries, and the continuation of the usual January drop in the nonmunitions group.

With the exception of the nonferrous group, all of the durable-goods groups employed fewer wage earners in January 1944 than in December 1943. Decreases ranging from 17,000 to more than 50,000 wage earners were reported by the transportation-equipment, the iron and steel, lumber, and automobile groups. A sharp decline in the shipbuilding industry, coupled with a lesser drop in aircraft, resulted in the decline of more than 50,000 wage earners in the transportation-equipment group. Inclement weather which made outdoor assembly-work difficult contributed to the employment declines in both these industries. Completion of Government contracts was, however, the most important factor. Many of the large yards are changing from the production of Liberty ships to that of Victory ships. The shipbuilding program scheduled for the first half of the year will require more rather than fewer workers, but lay-offs are occurring during this conversion period and the rate of hiring has fallen sharply.

Not a single nondurable-goods group reported increased employment in January. Employment in these groups dropped by more than 100,000 wage earners in January 1944 as compared with December 1943. Declines of 20,000 wage earners or more were reported by the food, textile-mill products, and chemicals groups. The decrease in the food group was due primarily to seasonal factors. Strikes in some cotton plants contributed to the drop in employment in the textile-

mill products group, and further cut-backs in the production of ammunition and explosives reduced employment in the chemicals group by 20,000 wage earners.

Although employment in trade fell between December and January, the declines were much less than the seasonal average. Because of the difficulty in recruiting workers, establishments were not so prompt as usual about laying off Christmas part-time workers.

TABLE 1.—*Estimated Number of Wage Earners and Indexes of Wage-Earner Employment in Manufacturing Industries, by Major Industry Group* [1]

[Subject to revision]

Industry group	Estimated number of wage earners (thousands)				Wage earner indexes (1939=100)	
	January 1944[2]	December 1943	November 1943	January 1943	January 1944[2]	December 1943
All manufacturing	13,630	13,870	14,000	13,503	166.4	169.3
Durable goods	8,265	8,397	8,449	7,875	228.9	232.5
Nondurable goods	5,365	5,473	5,551	5,628	117.1	119.5
Iron and steel and their products	1,714	1,736	1,744	1,693	172.9	175.1
Electrical machinery	739	742	742	661	285.1	286.2
Machinery, except electrical	1,249	1,257	1,263	1,202	236.4	238.0
Transportation equipment, except automobiles	2,266	2,318	2,337	2,067	1,427.9	1460.5
Automobiles	745	762	762	631	185.2	189.4
Nonferrous metals and their products	421	420	426	408	183.7	183.3
Lumber and timber basic products	435	454	463	489	103.5	107.9
Furniture and finished lumber products	354	357	361	362	107.8	108.9
Stone, clay, and glass products	342	351	351	362	116.5	119.7
Textile-mill products and other fiber manufactures	1,161	1,188	1,190	1,273	101.5	103.9
Apparel and other finished textile products	806	815	823	884	102.0	103.2
Leather and leather products	308	313	315	361	88.7	90.2
Food	962	990	1,013	965	112.5	115.9
Tobacco manufactures	88	90	90	96	94.2	96.4
Paper and allied products	312	316	316	309	117.7	119.1
Printing, publishing, and allied industries	337	342	342	335	102.7	104.4
Chemicals and allied products	669	689	729	715	232.1	238.9
Products of petroleum and coal	124	126	126	123	117.2	118.9
Rubber products	202	202	199	183	167.2	167.1
Miscellaneous industries	396	402	408	384	161.7	164.2

[1] The estimates and indexes presented in this table have been adjusted to final data for 1941 and preliminary data for the second quarter of 1942 made available by the Bureau of Employment Security of the Federal Security Agency.

[2] Preliminary data for January 1944.

Public Employment

Employment in the Federal executive service declined 7,000 in January 1944. This was exclusive of the estimated 220,000 temporary employees hired by the Post Office Department for the Christmas rush. The decline was entirely in the number of full-time employees, part-time employees having gained 3,000 in continental United States. Since the July 1943 peak in Federal employment, the number of women in full-time wage and salaried positions in continental United States has remained fairly stable, the decline affecting primarily the men. In January 1944 the number of women in such positions was 967,000 and constituted 37 percent of the total. Total employment in the Federal executive service was 156,000 higher in January 1944 than a year ago.

Employment on construction and shipbuilding and repair projects financed wholly or partially from Federal funds dropped 67,000 during January, from a total of 1,995,000 to 1,928,000. The decline on

public housing, war production facility, war public works, nonresidential building, street and road, river, harbor, and flood control, and airport construction was the result of the completion of certain contracts combined with the usual seasonal decline.

For the regular Federal services, data for the legislative and judicial services and for force-account employees in the executive service are reported to the Bureau of Labor Statistics; data for other executive-service employees are reported through the Civil Service Commission. The Bureau of Labor Statistics receives monthly reports on employment and pay rolls for the various construction and shipbuilding and repair projects financed wholly or partially from Federal funds directly from the shipyards and construction contractors and subcontractors.

A summary of employment and pay-roll data for the regular Federal services and for construction and shipbuilding and repair projects financed wholly or partially from Federal funds is given in table 2. It should be noted that employees located outside continental United States and their pay rolls are included in the figures in table 2. Federal workers who receive either $1 a year or no compensation whatever for their services are excluded from the figures.

TABLE 2.—*Employment and Pay Rolls in Regular Federal Services and on Projects Financed Wholly or Partially from Federal Funds*

[Subject to revision]

Service or program	Employment			Pay rolls		
	January 1944	December 1943	January 1943	January 1944	December 1943	January 1943
Regular Federal services:						
Executive [1]	2,988,434	[2]3,215,439	2,831,972	$579,434,000	$601,696,000	$464,262,172
War agencies [3]	2,170,680	2,176,534	2,049,403	414,115,000	414,853,000	319,213,000
Other agencies	817,754	[2]1,038,905	782,569	165,319,000	186,843,000	145,048,422
Judicial	2,665	2,655	2,636	767,539	774,028	710,946
Legislative	6,133	6,116	6,391	1,577,172	1,489,631	1,457,657
Construction and shipbuilding and repair projects:						
Financed from regular Federal appropriations [4]	1,794,200	1,846,700	2,395,700	454,987,000	477,092,000	530,790,000
War	1,749,200	1,802,100	2,317,900	446,554,000	468,731,000	516,833,000
Other	45,000	44,600	77,800	8,433,000	8,361,000	13,957,000
Public housing	39,800	43,900	77,000	8,103,000	8,925,000	11,425,000
War public works	16,400	16,500	11,100	2,250,000	2,343,000	1,447,000
Financed by R. F. C.	77,500	87,400	198,000	18,513,000	20,869,000	41,604,000
War	77,500	87,400	197,000	18,513,000	20,869,000	40,816,000
Other	0	0	1,000	0	0	788,000

[1] Includes employees in United States navy yards and on force-account construction who are also included under construction projects. Data for January 1943 are not strictly comparable with the series starting July 1943 because of the inclusion of employees on terminal leave in the earlier figure, and the inclusion beginning July 1943 of approximately 7,000 employees of the War Shipping Administration who were previously unreported; a change in the method of reporting temporary substitutes of the Post Office Department starting December 1943 accounts for an increase of approximately 25,000 employees. Pay rolls for December 1943 and January 1944 are estimated.

[2] Includes an estimated 220,000 temporary postal employees hired for the Christmas rush.

[3] Covers War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, Panama Canal, Office for Emergency Management, Office of Censorship, Office of Price Administration, Office of Strategic Services, Foreign Economic Administration, and the Petroleum Administration for War.

[4] Includes ship construction and repair in United States navy yards and the Federally financed part thereof in private shipyards.

Detailed Reports for Industrial and Business Employment, December 1943

Estimates of Nonagricultural Employment

ESTIMATES of civil employees in nonagricultural establishments by major groups are given in table 1. With the exception of the trade and finance-service-miscellaneous groups, they are not comparable with estimates published in the September 1942 or earlier issues of the Monthly Labor Review. Comparable figures for the months from January 1939 to July 1942 are given in the October 1942 issue of the Monthly Labor Review.

The estimates are based on reports of employers to the Bureau of Labor Statistics, on data made available by the Bureau of Employment Security and the Bureau of Old-Age and Survivors Insurance of the Federal Security Agency, and on information supplied by other Government agencies, such as the Interstate Commerce Commission, Civil Service Commission, and the Bureau of the Census. They do not include military personnel, emergency employment (such as WPA, NYA, and CCC), proprietors, self-employed persons, unpaid family workers, or domestics.

Estimates of employees in nonagricultural establishments, by States, are given each month in the Bureau of Labor Statistics' mimeographed release on employment and pay rolls.

TABLE 1.—*Estimated Number of Employees in Nonagricultural Establishments, by Industry Division*

Industry division	Estimated number of employees (in thousands)			
	December 1943	November 1943	October 1943	December 1942
Total estimated employment [1]	[2] 38,478	38,298	38,273	38,942
Manufacturing	16,078	16,229	16,205	15,684
Mining	815	809	819	885
Contract construction and Federal force-account construction	773	871	974	1,674
Transportation and public utilities	3,661	3,687	3,705	3,502
Trade	6,832	6,569	6,419	7,107
Finance, service, and miscellaneous	4,271	4,272	4,300	4,279
Federal, State, and local government, excluding Federal force-account construction	[2] 6,048	5,861	5,851	5,811

[1] Estimates exclude proprietors of unincorporated businesses, self-employed persons, domestics employed in private homes, public emergency employees, and personnel in the armed forces.
[2] Preliminary.

Industrial and Business Employment

Monthly reports on employment and pay rolls are available for 154 manufacturing industries and for 15 nonmanufacturing industries, including water transportation and class I steam railroads. The reports for the first two of these groups—manufacturing and nonmanufacturing—are based on sample surveys by the Bureau of Labor Statistics. The figures on water transportation are based on estimates prepared by the Maritime Commission, and those on class I steam railroads are compiled by the Interstate Commerce Commission.

The employment, pay roll, hours, and earnings figures for manufacturing, mining, laundries, and dyeing and cleaning cover wage earners only, but the figures for public utilities, brokerage, insurance, and hotels relate to all employees except corporation officers and executives, while for trade they relate to all employees except corporation officers, executives, and other employees whose duties are mainly supervisory. For crude-petroleum production they cover wage earners and clerical field force. The coverage of the reporting samples for the various nonmanufacturing industries ranges from approximately 25 percent for wholesale and retail trade, dyeing and cleaning, and insurance, to approximately 80 percent for public utilities and 90 percent for mining.

The general manufacturing indexes are computed from reports supplied by representative establishments in the 154 manufacturing industries surveyed. These reports cover more than 65 percent of the total wage earners in all manufacturing industries of the country and about 80 percent of the wage earners in the 154 industries covered.

Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and the amount of pay rolls for the pay period ending nearest the 15th of the month.

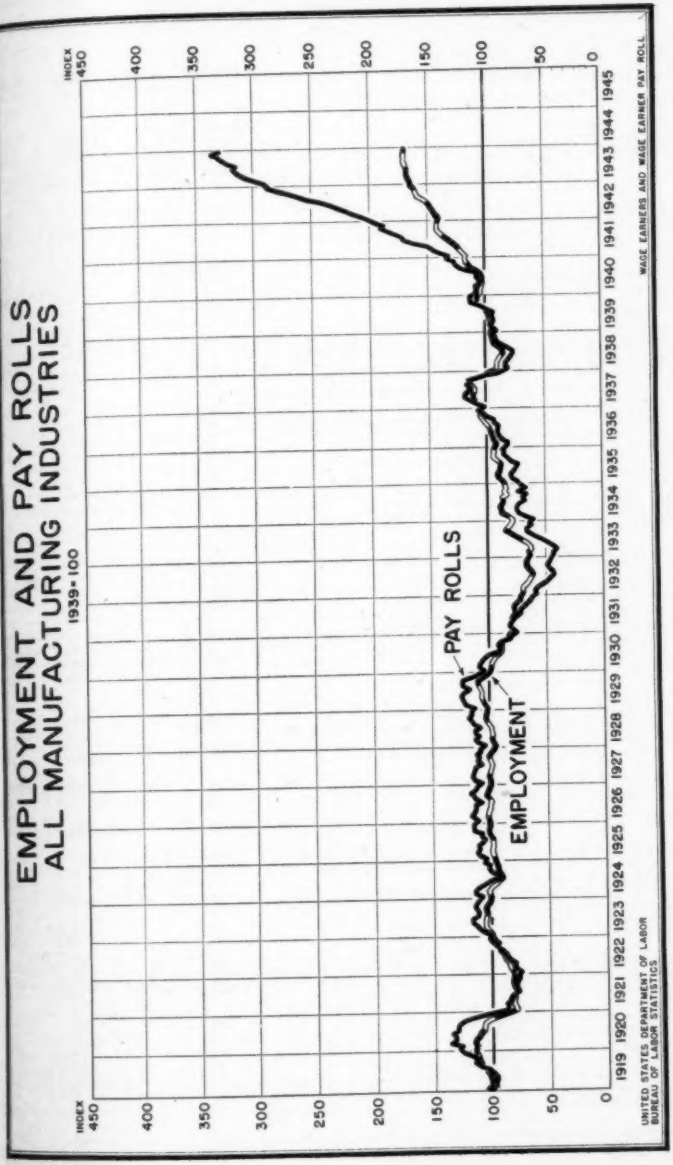
INDEXES OF EMPLOYMENT AND PAY ROLLS

Employment and pay-roll indexes, for both manufacturing and nonmanufacturing industries, for October, November, and December 1943, and for December 1942 are presented in tables 3 and 5.

The revised manufacturing indexes and aggregates in tables 2 and 3 are not comparable with the indexes published in the November 1942 or earlier issues of the Monthly Labor Review, as a result of changes in definitions, a change in the index base period, and adjustments in levels. Revised figures for the major manufacturing groups are available in mimeographed form by months from January 1939 through November 1942 and for individual manufacturing industries from January 1939 through August 1942.

The figures relating to all manufacturing industries combined, to the durable- and nondurable-goods divisions, and to the major industry groups, have been adjusted to conform to levels indicated by final 1941 and preliminary data for the second quarter of 1942 released by the Bureau of Employment Security of the Federal Security Agency. The Bureau of Employment Security data referred to are (a) employment totals reported by employers under State unemployment-compensation programs, and (b) estimates of the number of employees not reported under the programs of some of these States, which do not cover small establishments. The latter estimates were obtained from tabulations prepared by the Bureau of Old-Age and Survivors Insurance, which obtains reports from all employers regardless of size of establishment.

Not all industries in each major industry group are represented in the tables, since minor industries are not canvassed by the Bureau, and others cannot be shown because of their close relationship to the war program. Furthermore, no attempt has been made to allocate among the separate industries the adjustment to unemployment-compensation data. Hence, the estimates for individual industries within a group will not in general add to the total estimate for that group.


EMPLOYMENT AND PAY ROLLS
ALL MANUFACTURING INDUSTRIES
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PAY ROLLS
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UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
WAGE EARNERS AND WAGE EARNER PAY ROLL

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries* [1]

Industry [2]	Estimated number of wage earners (in thousands)			
	December 1943	November 1943	October 1943	December 1942
All manufacturing	13,870	14,000	13,965	13,674
Durable goods	8,397	8,449	8,389	7,798
Nondurable goods	5,473	5,551	5,576	5,894
Durable goods				
Iron and steel and their products	1,736	1,744	1,731	1,678
Blast furnaces, steel works, and rolling mills	503.1	507.8	509.6	522.8
Gray-iron and semisteel castings	78.1	78.3	78.2	87.1
Malleable-iron castings	25.9	25.8	25.7	27.2
Steel castings	80.2	80.3	81.0	83.2
Cast-iron pipe and fittings	15.6	15.5	15.3	20.1
Tin cans and other tinware	33.6	33.3	34.0	38.3
Wire drawn from purchased rods	35.5	35.5	35.5	35.0
Wirework	34.5	34.4	33.4	32.3
Cutlery and edge tools	22.7	22.7	22.3	21.1
Tools (except edge tools, machine tools, files, and saws)	28.4	27.9	27.5	27.1
Hardware	47.8	47.5	46.6	42.1
Plumbers' supplies	23.4	23.8	23.3	22.0
Stoves, oil burners, and heating equipment, not elsewhere classified	62.5	60.9	59.1	52.0
Steam and hot-water heating apparatus and steam fittings	60.1	59.9	59.7	58.7
Stamped and enameled ware and galvanizing	93.4	94.5	93.4	77.2
Fabricated structural and ornamental metalwork	74.1	73.8	72.4	68.2
Metal doors, sash, frames, molding, and trim	13.8	14.1	13.7	11.0
Bolts, nuts, washers, and rivets	30.0	30.0	29.7	28.0
Forgings, iron and steel	40.5	40.6	40.1	38.8
Wrought pipe, welded and heavy riveted	26.0	26.4	26.5	22.3
Screw-machine products and wood screws	49.1	49.2	49.0	42.1
Steel barrels, kegs, and drums	8.7	8.5	8.7	6.6
Electrical machinery	742	742	734	649
Machinery, except electrical	1,257	1,263	1,255	1,100
Machinery and machine-shop products	499.5	500.5	498.6	465.4
Tractors	58.3	57.5	56.3	48.7
Agricultural machinery, excluding tractors	42.7	42.0	41.1	30.5
Machine tools	92.0	95.0	97.4	122.0
Machine-tool accessories [3]	80.6	83.8	84.5	93.6
Textile machinery	29.0	29.0	28.8	29.3
Pumps and pumping equipment	82.3	81.1	78.7	69.1
Typewriters	12.6	13.0	12.2	10.8
Cash registers, adding and calculating machines	36.2	36.4	36.3	32.6
Washing machines, wringers, and driers, domestic	15.0	14.8	14.7	10.8
Sewing machines, domestic and industrial	10.6	10.7	10.7	11.2
Refrigerators and refrigeration equipment	60.8	60.3	58.4	43.9
Transportation equipment, except automobiles	2,318	2,337	2,324	1,900
Motorcycles, bicycles, and parts	10.4	10.4	10.3	9.3
Automobiles	762	762	751	613
Nonferrous metals and their products	420	426	422	405
Smelting and refining, primary, of nonferrous metals	47.5	47.6	46.9	41.9
Clocks and watches	25.6	25.4	24.9	25.7
Jewelry (precious metals) and jewelers' findings	15.0	15.1	15.2	16.8
Silverware and plated ware	11.7	11.9	11.9	11.5
Lighting equipment	26.1	26.9	26.6	22.4
Sheet-metal work, not elsewhere classified	29.4	29.2	29.2	29.6
Lumber and timber basic products	454	463	463	515
Sawmills and logging camps	246.2	252.5	253.4	282.0
Planing and plywood mills	79.1	79.6	78.9	86.5
Furniture and finished lumber products	357	361	359	365
Mattresses and bedsprings	18.5	19.2	19.4	15.9
Furniture	166.8	169.3	168.0	169.8
Wooden boxes, other than cigar	28.8	29.0	29.3	32.3
Caskets and other morticians' goods	12.0	12.0	11.7	12.1
Wood preserving	10.2	10.2	10.0	11.6
Wood, turned and shaped	22.9	22.2	21.9	23.3
Stone, clay, and glass products	351	351	350	366
Glass and glassware	92.1	91.4	89.8	82.4
Glass products made from purchased glass	11.1	11.1	10.8	12.0
Cement	20.9	21.7	22.4	26.6
Brick, tile, and terra cotta	46.6	46.3	46.9	58.1
Pottery and related products	42.1	42.4	42.1	45.4

See footnotes at end of table.

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries* [1]—Con.

Industry [2]	Estimated number of wage earners (in thousands)			
	December 1943	November 1943	October 1943	December 1942
Durable goods—Continued				
Stone, clay, and glass products—Continued.				
Gypsum	4.6	4.6	4.5	4.7
Wallboard, plaster (except gypsum), and mineral wool	10.7	10.5	10.8	11.4
Lime	9.0	8.9	8.9	9.8
Marble, granite, slate, and other products [4]	12.5	12.6	12.6	13.1
Abrasives	23.9	24.2	24.1	21.3
Asbestos products	22.0	22.2	22.0	22.0
Nondurable goods				
Textile-mill products and other fiber manufactures	1,188	1,190	1,187	1,287
Cotton manufactures, except smallwares	473.2	473.6	472.1	510.3
Cotton smallwares	15.3	15.4	15.7	17.7
Silk and rayon goods	94.9	94.4	93.8	99.1
Woolen and worsted manufactures, except dyeing and finishing	160.4	160.8	160.7	176.9
Hosiery	113.2	113.6	113.5	124.2
Knitted cloth	11.6	11.6	11.6	12.0
Knitted outerwear and knitted gloves	31.7	32.0	32.1	31.6
Knitted underwear	39.4	39.7	39.7	45.2
Dyeing and finishing textiles, including woolens and worsted	65.0	65.0	64.7	72.7
Carpets and rugs, wool	20.9	21.1	21.3	23.8
Hats, fur-felt	9.9	10.0	10.0	10.0
Jute goods, except felts	3.6	3.6	3.6	4.1
Cordage and twine	16.8	16.8	16.7	16.4
Apparel and other finished textile products	815	823	825	886
Men's clothing, not elsewhere classified	218.0	221.6	222.2	235.8
Shirts, collars, and nightwear	55.8	56.4	56.4	65.0
Underwear and neckwear, men's	12.6	12.8	12.7	13.2
Work shirts	17.3	17.8	17.8	18.6
Women's clothing, not elsewhere classified	229.9	231.0	232.2	247.4
Corsets and allied garments	16.3	16.5	16.5	17.6
Millinery	18.2	17.7	18.8	17.6
Handkerchiefs	3.5	3.5	3.5	4.0
Curtains, draperies, and bedspreads	16.1	16.4	16.2	18.3
Housefurnishings, other than curtains, etc	13.4	13.8	13.7	17.5
Textile bags	15.3	15.0	14.4	16.7
Leather and leather products	313	315	314	364
Leather	41.1	40.9	41.6	49.9
Boot and shoe cut stock and findings	16.5	16.5	16.3	18.6
Boots and shoes	176.0	177.9	177.0	203.9
Leather gloves and mittens	13.9	14.1	14.0	14.4
Trunks and suitcases	12.7	12.7	12.2	15.6
Food	990	1,013	1,045	1,018
Slaughtering and meat packing	170.6	164.3	159.3	186.8
Butter	19.8	20.7	21.6	20.6
Condensed and evaporated milk	12.1	12.2	12.8	11.7
Ice cream	13.4	13.9	14.7	14.3
Flour	29.7	30.0	29.8	26.8
Feeds, prepared	21.8	21.8	21.4	21.5
Cereal preparations	9.5	9.8	10.1	9.8
Baking	262.8	263.7	257.6	263.9
Sugar refining, cane	14.2	14.9	14.5	12.5
Sugar, beet	13.2	20.3	17.4	22.8
Confectionery	60.8	60.3	57.3	64.0
Beverages, nonalcoholic	26.7	27.4	28.2	24.1
Malt liquors	46.9	47.3	48.0	40.8
Canning and preserving	108.6	124.2	170.9	113.6
Tobacco manufactures	90	90	89	99
Cigarettes	35.9	35.7	35.1	35.6
Cigars	39.7	39.9	39.9	48.6
Tobacco (chewing and smoking) and snuff	8.7	8.6	8.4	8.7
Paper and allied products	316	316	313	309
Paper and pulp	150.0	149.4	148.5	150.6
Paper goods, other	47.5	47.9	47.8	48.0
Envelopes	10.3	10.4	10.2	10.1
Paper bags	13.1	12.9	12.5	12.2
Paper boxes	85.5	85.9	84.8	78.6

See footnotes at end of table.

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries* [1]—Con.

Industry	Estimated number of wage earners (in thousands)			
	December 1943	November 1943	October 1943	December 1942
Nondurable goods—Continued				
Printing, publishing, and allied industries	342	342	336	342
Newspapers and periodicals	113.0	113.2	112.6	113.0
Printing, book and job	137.1	136.8	133.4	134.1
Lithographing	25.3	25.0	24.9	25.6
Bookbinding	30.4	30.2	29.7	29.0
Chemicals and allied products	689	729	740	702
Paints, varnishes, and colors	29.9	29.8	29.7	29.1
Drugs, medicines, and insecticides	48.6	48.6	47.2	41.7
Perfumes and cosmetics	11.8	11.8	11.2	10.2
Soap	13.6	13.5	13.3	13.6
Rayon and allied products	53.0	51.6	53.0	51.1
Chemicals, not elsewhere classified	120.7	120.9	120.4	111.6
Compressed and liquefied gases	6.2	6.3	6.3	6.2
Cottonseed oil	21.6	22.3	21.9	21.7
Fertilizers	22.1	21.2	20.1	20.5
Products of petroleum and coal	126	126	126	124
Petroleum refining	82.6	82.2	82.4	79.0
Coke and byproducts	23.5	23.5	23.8	22.9
Paving materials	1.7	2.0	1.9	1.5
Roofing materials	9.8	9.8	9.7	10.5
Rubber products	202	199	195	180
Rubber tires and inner tubes	93.7	92.1	90.1	79.0
Rubber boots and shoes	21.7	21.6	21.2	21.3
Rubber goods, other	76.8	76.0	74.3	79.0
Miscellaneous industries	402	408	406	382
Photographic apparatus	30.0	30.4	30.4	26.0
Pianos, organs, and parts	10.0	10.8	10.7	8.6
Games, toys, and dolls	16.4	16.9	16.4	14.9
Buttons	10.3	10.2	10.1	12.6

[1] Estimates for the major industry groups have been adjusted to final data for 1941 and preliminary data for the second quarter of 1942 made available by the Bureau of Employment Security of the Federal Security Agency, and are not comparable with data in issues of the Monthly Labor Review prior to March 1943. Comparable series for earlier months are available upon request. Estimates for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data. For this reason, together with the fact that this Bureau has not prepared estimates for certain industries, and does not publish wage earners in war industries, the sum of the individual industry estimates will not agree with totals shown for the major industry groups.

[2] Unpublished information concerning the following war industries may be obtained by authorized agencies upon request: Aircraft engines; aircraft and parts, excluding engines; alloying; aluminum manufactures; ammunition; cars, electric- and steam-railroad; communication equipment; electrical equipment; engines and turbines; explosives and safety fuses; fire extinguishers; firearms; fireworks; locomotives; optical instruments and ophthalmic goods; professional and scientific instruments and fire-control equipment; radios and phonographs; and shipbuilding.

[3] Comparable data for earlier months available upon request.

[4] Revisions have been made as follows in the data published for earlier months:

Marble, granite, slate, and other products.—July, August, and September 1943 wage earners to 12.6, 12.9, and 12.6.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries* [1]

[1939 average=100]

Industry [2]	Wage-earner employment				Wage-earner pay roll			
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942
All manufacturing	169.3	170.9	170.5	164.5	328.5	336.2	332.6	287.9
Durable goods	232.5	234.0	232.3	215.5	461.6	474.0	468.8	391.6
Nondurable goods	119.5	121.2	121.7	124.3	198.2	201.4	199.6	198.4
Durable goods								
Iron and steel and their products	175.1	175.9	174.6	169.1	316.7	320.1	318.6	275.7
Blast furnaces, steel works, and rolling mills	129.5	130.7	131.2	134.5	223.7	226.8	232.6	203.8
Gray-iron and semisteel castings	133.7	134.0	133.9	149.1	254.1	257.0	258.4	254.1

See footnotes at end of table.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries* [1]—Continued

Industry [2]	Wage-earner employment				Wage-earner pay roll			
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942
Durable goods—Continued								
Iron and steel and their products—Continued.								
Malleable-iron castings	143.4	143.0	142.3	150.6	289.9	283.3	287.3	255.2
Steel castings	266.6	267.0	269.1	273.0	482.8	486.0	482.8	452.8
Cast-iron pipe and fittings	94.3	93.7	92.6	121.6	168.3	165.2	167.6	202.7
Tin cans and other tinware	105.8	105.0	107.0	89.0	175.1	169.4	175.1	133.5
Wire drawn from purchased rods	161.8	161.6	161.6	159.3	259.9	262.3	260.0	238.0
Wirework	113.5	113.3	109.9	106.3	220.5	222.2	215.7	185.8
Cutlery and edge tools	147.2	147.2	144.6	136.7	298.0	301.8	293.8	262.5
Tools (except edge tools, machine tools, files, and saws)	185.3	182.4	179.4	176.8	346.2	347.9	342.5	317.3
Hardware	134.2	133.2	130.6	118.1	265.7	268.6	265.5	215.1
Plumbers' supplies	95.1	96.5	94.5	80.1	166.8	172.1	166.7	140.2
Stoves, oil burners, and heating equipment, not elsewhere classified	135.6	132.0	128.0	112.8	246.3	239.1	231.7	179.4
Steam and hot-water heating apparatus and steam fittings	198.4	197.6	197.0	187.0	369.2	365.2	365.1	326.9
Stamped and enameled ware and galvanizing	168.1	170.1	168.2	138.9	331.6	339.9	330.9	247.4
Fabricated structural and ornamental metal-work	208.6	207.7	203.7	192.0	394.1	394.7	384.3	320.2
Metal doors, sash, frames, molding, and trim	178.7	182.6	177.6	142.5	333.4	337.2	327.0	241.4
Bolts, nuts, washers, and rivets	209.8	209.4	207.7	187.5	400.4	408.6	396.7	319.4
Forgings, iron and steel	263.4	264.1	260.8	252.3	519.0	531.2	514.2	476.1
Wrought pipe, welded and heavy riveted	310.6	315.3	316.6	266.4	564.7	570.3	564.3	480.5
Screw-machine products and wood screws	289.8	290.5	289.4	290.3	562.2	569.5	560.7	516.0
Steel barrels, kegs, and drums	142.6	139.7	142.5	112.4	288.2	285.9	272.0	193.8
Electrical machinery	286.2	286.4	283.4	250.3	495.9	502.2	494.7	415.5
Machinery, except electrical	238.0	239.0	237.6	225.1	440.5	445.7	441.4	392.9
Machinery and machine-shop products	246.9	247.4	246.4	230.0	449.9	456.9	447.4	394.6
Tractors	186.5	183.8	180.2	155.6	289.2	288.0	279.2	223.1
Agricultural machinery, excluding tractors	153.7	150.9	147.9	109.8	295.6	293.8	288.4	181.1
Machine tools	251.1	259.3	266.0	333.1	425.6	441.3	455.8	554.5
Machine-tool accessories [3]	320.3	332.9	335.9	372.2	536.3	563.3	562.1	603.1
Textile machinery	132.2	132.2	131.3	133.7	239.0	238.7	237.8	231.8
Pumps and pumping equipment	339.5	334.8	324.8	285.1	709.2	694.6	693.8	582.7
Typewriters	77.8	77.9	75.5	66.8	159.2	160.2	151.1	119.6
Cash registers, adding and calculating machines	183.8	184.9	184.7	165.7	368.6	374.4	377.9	296.8
Washing machines, wringers and driers, domestic	201.6	198.8	197.5	144.6	347.0	339.4	340.5	226.5
Sewing machines, domestic and industrial	135.0	136.7	137.1	142.4	287.3	294.2	294.0	269.6
Refrigerators and refrigeration equipment	172.8	171.4	166.1	130.6	308.9	306.0	296.2	201.5
Transportation equipment, except automobiles	1460.5	1472.4	1464.3	1259.2	2901.1	3020.6	2947.6	2348.0
Motorcycles, bicycles, and parts	149.0	149.5	147.7	133.8	261.4	265.2	269.0	234.7
Automobiles	189.4	189.5	186.7	152.5	339.7	356.2	359.5	255.1
Nonferrous metals and their products	183.3	185.6	184.3	176.7	335.7	343.9	338.2	303.2
Smelting and refining, primary, of nonferrous metals	172.0	172.3	169.7	151.7	300.1	305.9	300.9	234.4
Clocks and watches	126.1	125.0	122.6	126.8	245.8	248.5	241.9	232.3
Jewelry (precious metals) and jewelers' findings	104.1	104.9	105.4	116.1	163.5	163.8	159.1	181.3
Silverware and plated ware	96.3	98.2	97.8	94.6	173.5	174.0	169.8	152.3
Lighting equipment	127.7	131.4	130.0	109.5	223.1	233.2	226.5	188.7
Sheet-metal work, not elsewhere classified	156.8	155.7	155.6	158.1	294.5	292.9	282.0	268.2
Lumber and timber basic products	107.9	110.1	110.2	122.5	188.6	197.4	200.9	181.9
Sawmills and logging camps	85.5	87.7	88.0	97.9	151.2	160.2	163.8	144.4
Planing and plywood mills	108.9	109.5	108.6	119.0	178.9	180.9	181.8	177.2
Furniture and finished lumber products	108.9	110.1	109.4	111.4	189.3	191.1	191.0	170.6
Mattresses and bedsprings	100.8	104.6	105.6	86.8	164.6	174.0	175.4	127.2
Furniture	104.8	106.3	105.5	106.7	183.2	184.8	184.4	163.9
Wooden boxes, other than cigar	113.7	114.6	115.6	127.4	208.9	208.6	212.4	205.6
Caskets and other morticians' goods	96.4	96.1	94.2	97.5	157.8	155.7	150.3	144.6
Wood preserving	90.7	90.8	89.2	103.0	172.1	177.0	181.3	168.9
Wood, turned and shaped	104.0	101.0	99.4	106.0	175.3	172.6	169.4	163.4
Stone, clay, and glass products	119.7	119.5	119.3	125.4	192.2	195.2	194.0	181.2
Glass and glassware	131.9	130.9	128.6	118.0	206.9	206.7	202.1	166.1
Glass products made from purchased glass	110.7	110.6	107.9	119.9	176.0	179.7	169.4	167.2
Cement	87.7	91.1	94.1	120.8	127.4	134.1	141.0	156.1
Brick, tile, and terra cotta	82.1	81.5	82.5	104.1	125.6	127.0	129.9	149.7
Pottery and related products	127.3	128.2	127.3	137.2	184.7	195.0	192.5	188.2
Gypsum	93.8	93.5	91.2	95.9	158.5	165.1	159.9	148.7

See footnotes at end of table.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries* [1]—Continued

Industry [2]	Wage-earner employment				Wage-earner pay roll			
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942
Durable goods—Continued								
Stone, clay, and glass products—Continued.								
Wallboard, plaster (except gypsum), and mineral wool	132.5	129.4	132.5	140.7	228.9	222.8	230.0	222.0
Lime	95.4	94.1	94.4	103.6	171.2	171.8	171.3	157.7
Marble, granite, slate, and other products [4]	67.3	67.9	68.0	70.6	97.7	98.2	98.9	98.7
Abrasives	309.5	312.4	311.3	275.6	487.0	509.5	501.0	403.3
Asbestos products	138.7	139.6	138.3	138.3	268.1	266.5	262.7	262.1
Nondurable goods								
Textile-mill products and other fiber manufactures	103.9	104.0	103.8	112.5	175.9	176.2	174.4	180.9
Cotton manufactures, except smallwares	119.5	119.6	119.2	128.9	207.2	207.4	205.1	217.7
Cotton smallwares	114.6	115.9	117.7	132.5	196.5	196.1	203.3	222.3
Silk and rayon goods	79.2	78.8	78.3	82.7	138.7	137.9	136.1	133.7
Woolen and worsted manufactures, except dyeing and finishing	107.5	107.8	107.3	118.5	198.0	198.6	197.6	207.9
Hosiery	71.2	71.4	71.3	78.1	110.1	110.4	109.2	108.5
Knitted cloth [4]	106.1	106.3	106.3	109.6	178.5	178.2	174.7	167.7
Knitted outerwear and knitted gloves	112.7	113.9	114.3	112.7	193.9	200.9	195.2	172.9
Knitted underwear	102.3	103.1	103.0	117.4	177.1	180.0	178.7	194.0
Dyeing and finishing textiles, including woolen and worsted	97.2	97.3	96.8	108.7	154.3	153.5	152.4	168.3
Carpets and rugs, wool	81.8	82.5	83.3	93.0	133.9	137.5	135.9	145.1
Hats, fur-felt	68.3	68.4	68.5	68.4	123.4	124.3	120.5	109.3
Jute goods, except felts	99.7	101.0	101.6	114.2	184.7	186.4	183.2	196.6
Cordage and twine	139.2	139.3	138.3	135.7	241.4	242.7	237.7	221.9
Apparel and other finished textile products	103.2	104.2	104.6	112.2	163.5	165.6	164.1	154.0
Men's clothing, not elsewhere classified	99.7	101.4	101.6	107.8	156.7	161.8	158.2	145.7
Shirts, collars, and nightwear	79.2	80.0	80.1	92.2	133.8	135.2	134.2	127.8
Underwear and neckwear, men's	78.3	79.3	78.5	81.6	143.1	149.7	145.7	136.2
Work shirts	128.4	132.2	132.0	138.0	218.9	236.8	229.4	226.0
Women's clothing, not elsewhere classified	84.6	85.0	85.5	91.1	133.2	132.6	132.1	126.0
Corsets and allied garments	86.7	87.8	87.7	93.7	140.3	146.2	142.9	130.3
Millinery	75.1	73.0	77.2	72.6	99.7	92.3	105.5	73.7
Handkerchiefs	71.8	73.2	73.2	82.2	118.3	125.8	126.5	122.6
Curtains, draperies, and bedspreads	95.4	96.9	96.1	108.1	169.9	173.7	167.8	165.1
Housefurnishings, other than curtains, etc	126.2	129.9	129.1	164.3	229.7	244.0	235.7	261.3
Textile bags	127.6	125.1	120.0	139.6	195.3	196.2	189.3	209.4
Leather and leather products	90.2	90.9	90.5	104.9	147.3	146.1	143.2	139.5
Leather	87.0	86.7	87.9	105.5	140.6	135.4	135.1	137.5
Boot and shoe cut stock and findings	87.7	87.5	86.5	99.0	133.8	131.7	131.7	141.3
Boots and shoes	80.7	81.6	81.2	93.5	133.4	133.1	129.8	144.5
Leather gloves and mittens	138.8	140.9	139.8	144.3	222.9	237.2	230.1	206.8
Trunks and suitcases	152.1	152.3	146.6	186.9	239.3	241.4	226.0	230.4
Food	115.9	118.5	122.3	119.1	182.9	186.0	182.2	165.4
Slaughtering and meat packing	141.6	136.4	132.2	155.0	238.7	232.3	201.2	213.6
Butter	110.5	115.4	120.6	114.8	164.7	168.6	175.1	149.8
Condensed and evaporated milk	124.8	125.6	132.4	120.5	185.1	188.6	196.2	161.8
Ice cream	85.6	88.6	93.6	91.1	114.1	118.0	123.1	111.3
Flour	120.0	121.1	120.3	108.1	197.1	197.0	193.9	155.3
Feeds, prepared	141.3	141.5	138.8	139.7	225.8	233.9	225.8	213.4
Cereal preparations	127.4	131.7	135.3	131.9	217.2	226.7	236.3	189.9
Baking	113.9	114.3	111.7	114.4	163.2	163.6	159.0	140.3
Sugar refining, cane	100.0	105.4	102.7	87.9	158.1	167.3	160.4	112.0
Sugar, beet	126.4	194.6	166.9	218.8	161.9	283.0	206.2	300.1
Confectionery	122.3	121.1	115.3	128.7	190.4	188.6	178.1	184.1
Beverages, nonalcoholic	125.4	128.7	132.6	113.5	157.0	159.7	161.2	127.9
Malt liquors	130.1	131.1	133.1	113.2	178.5	181.9	183.8	136.3
Canning and preserving	80.8	92.4	127.1	84.5	149.0	163.6	224.2	136.3
Tobacco manufactures	96.4	96.3	95.5	106.3	161.1	162.5	160.2	138.6
Cigarettes	130.7	130.2	128.1	129.9	190.4	196.3	190.8	162.1
Cigars	78.0	78.4	78.3	95.5	143.2	141.2	141.4	146.1
Tobacco (chewing and smoking) and snuff	94.6	93.5	92.0	94.7	141.6	142.4	140.0	134.9
Paper and allied products	119.1	119.1	118.0	116.4	183.7	184.8	183.0	166.5
Paper and pulp	109.1	108.7	108.0	109.6	174.6	174.9	174.1	163.6
Paper goods, other	126.2	127.3	126.9	127.4	185.4	187.4	187.4	173.2
Envelopes	119.0	119.9	117.7	116.4	172.7	176.6	172.3	156.3
Paper bags	118.2	116.4	112.5	109.7	191.2	191.6	180.6	160.9
Paper boxes	123.6	124.1	122.6	113.6	185.7	187.9	184.1	162.0

See footnotes at end of table.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries* [1]—Continued

Industry [2]	Wage-earner employment				Wage-earner pay roll			
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942
Nondurable goods—Continued								
Printing, publishing, and allied industries	104.4	104.2	102.6	104.3	134.9	133.7	131.0	126.5
Newspapers and periodicals	95.2	95.4	94.9	99.5	116.0	115.2	114.4	113.4
Printing, book and job	108.5	108.3	105.6	106.3	143.9	141.9	138.2	132.9
Lithographing	97.3	96.3	95.6	98.5	130.9	131.1	125.0	119.9
Bookbinding	118.0	117.2	115.1	108.5	187.7	187.9	183.1	162.8
Chemicals and allied products	238.9	253.0	256.9	243.7	403.4	428.6	437.6	383.4
Paints, varnishes, and colors	106.2	106.0	105.7	103.4	159.0	160.8	160.0	138.9
Drugs, medicines, and insecticides	177.5	177.4	172.2	152.0	259.3	258.4	251.4	196.9
Perfumes and cosmetics	114.0	114.0	107.6	99.8	155.5	162.1	151.6	130.1
Soap	100.4	99.8	98.0	101.5	160.8	157.5	151.0	135.4
Rayon and allied products	109.7	107.0	109.9	105.8	167.6	166.4	168.5	148.5
Chemicals, not elsewhere classified	173.4	173.8	173.1	160.4	288.5	291.9	290.4	240.8
Compressed and liquefied gases	156.5	159.8	159.1	160.2	270.6	275.8	272.2	236.9
Cottonseed oil	142.3	146.6	144.2	143.0	274.0	281.3	274.2	234.3
Fertilizers	118.0	113.2	107.2	109.4	227.3	222.8	216.3	173.3
Products of petroleum and coal	118.9	119.0	119.3	117.4	197.3	196.3	197.7	165.1
Petroleum refining	113.4	112.8	113.2	107.1	186.4	185.5	185.5	151.5
Coke and byproducts	108.3	108.3	109.7	119.2	180.6	175.8	182.5	163.5
Paving materials	68.5	81.6	79.0	63.2	121.9	140.1	146.1	95.0
Roofing materials	122.3	122.2	120.6	130.6	211.5	218.6	213.7	204.8
Rubber products	167.1	164.9	161.3	149.0	285.5	287.7	278.0	228.6
Rubber tires and inner tubes	173.2	170.1	166.4	147.4	286.0	289.0	279.3	219.7
Rubber boots and shoes	146.2	145.7	143.1	145.3	245.9	251.5	243.6	237.6
Rubber goods, other	148.3	146.8	143.5	135.3	257.3	256.7	247.8	208.8
Miscellaneous industries	164.2	166.7	166.0	156.7	300.8	307.6	301.3	261.3
Photographic apparatus	174.0	175.8	176.1	150.8	273.0	283.6	278.2	229.6
Pianos, organs, and parts	131.8	141.6	141.1	112.4	244.1	266.4	266.8	197.6
Games, toys, and dolls	87.9	90.6	88.0	79.3	150.3	155.8	158.0	133.9
Buttons	93.7	92.6	92.2	114.5	173.7	173.9	169.4	182.3

[1] Indexes for the major industry groups have been adjusted to final data for 1941 and preliminary data for the second quarter of 1942 made available by the Bureau of Employment Security of the Federal Security Agency, and are not comparable with data in issues of the Monthly Labor Review prior to March 1943. Comparable series for earlier months are available upon request. Indexes for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data.

[2] Unpublished information concerning the following war industries may be obtained by authorized agencies upon request: Aircraft engines; aircraft and parts, excluding engines; alloying; aluminum manufactures; ammunition; cars, electric- and steam-railroad; communication equipment; electrical equipment; engines and turbines; explosives and safety fuses; fire extinguishers; firearms; firework s; locomotives; optical instruments and ophthalmic goods; professional and scientific instruments and fire-control equipment; radios and phonographs; and shipbuilding.

[3] Comparable indexes for earlier months available upon request.

[4] Revisions have been made as follows in the data published for earlier months:

Marble, granite, slate, and other products.—June 1943 to September 1943 pay-roll indexes to 89.0, 91.1, 97.9, and 91.3; July, August, and September 1943 employment indexes to 68.1, 69.6, and 68.2.

Knitted cloth.—September 1942, February, July, and August 1943 pay-roll indexes to 143.7, 168.7, 164.4, and 172.4.

TABLE 4.—*Estimated Number of Wage Earners in Selected Nonmanufacturing Industries*

Industry	Estimated number of wage earners (in thousands)			
	December 1943	November 1943	October 1943	December 1942
Anthracite mining	69.6	68.7	69.6	75.3
Bituminous-coal mining	373	368	373	418
Metal mining	90.9	91.6	93.8	102.1
Iron	29.7	30.2	31.7	31.8
Copper	30.8	30.6	31.0	33.5
Lead and zinc	18.8	18.8	18.8	19.7
Gold and silver	6.4	6.3	6.3	9.7
Miscellaneous metal mining	5.2	5.7	6.0	7.4
Electric light and power [1]	205	206	207	221
Street railways and busses [1]	230	230	229	216
Hotels (year-round) [1]	352	351	351	333
Power laundries	248	247	249	267
Dyeing and cleaning	76.8	78.2	81.0	77.5
Class I steam railroads [2]	1,351	1,364	1,368	1,322

[1] Data include salaried personnel.

[2] Source: Interstate Commerce Commission. Data include salaried personnel.

TABLE 5.—*Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries*

[1939 average = 100]

Industry	Employment indexes				Pay-roll indexes			
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1942
Coal mining:								
Anthracite	84.0	82.9	84.0	90.9	156.6	90.4	146.5	128.4
Bituminous	100.6	99.4	100.6	112.7	231.1	141.6	198.0	193.7
Metal mining	103.1	103.9	106.3	115.8	160.8	161.6	170.2	168.7
Iron	148.0	150.4	158.0	158.4	222.4	224.2	263.1	229.3
Copper	129.4	128.7	129.9	140.2	216.5	215.8	216.3	208.1
Lead and zinc [1]	120.8	120.6	120.7	127.2	216.0	213.7	212.5	210.5
Gold and silver	25.7	25.5	25.5	39.1	33.2	32.3	33.2	67.2
Miscellaneous	130.1	142.8	151.7	185.1	205.3	241.6	241.7	277.9
Quarrying and nonmetallic mining	89.6	91.3	94.1	105.9	153.3	161.2	169.4	160.6
Crude-petroleum production [2]	80.9	80.9	81.0	82.9	123.8	124.7	122.1	106.5
Public utilities:								
Telephone and telegraph	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Electric light and power	84.1	84.5	84.9	90.4	111.9	112.2	111.8	109.4
Street railways and busses	118.8	118.6	118.1	111.6	161.6	161.4	158.9	145.7
Wholesale trade	95.9	95.5	94.2	99.6	132.2	131.9	129.5	126.6
Retail trade	112.6	104.2	100.6	117.0	135.4	126.8	123.3	131.6
Food	108.7	108.2	107.2	111.2	133.7	132.0	130.4	127.7
General merchandise	156.5	130.4	119.2	166.4	174.4	150.0	138.7	183.9
Apparel	127.7	117.9	114.1	128.5	159.1	146.9	142.0	146.1
Furniture and housefurnishings	69.8	67.5	66.4	81.0	93.9	88.9	86.9	98.7
Automotive [4]	66.3	64.8	63.2	64.3	91.8	90.1	88.0	80.7
Lumber and building materials	92.2	92.4	92.5	93.3	124.5	125.6	128.1	117.3
Hotels (year-round) [4]	109.0	108.8	108.9	103.3	149.7	148.8	147.2	131.6
Power laundries	109.9	109.4	110.2	118.3	151.8	150.3	149.1	144.6
Dyeing and cleaning	113.8	115.9	120.0	114.8	163.4	166.9	173.4	142.9
Class I steam railroads [5]	136.9	138.2	138.6	133.7	(6)	(6)	(6)	(6)
Water transportation [7]	190.8	176.9	176.7	98.4	427.1	394.2	393.6	225.0

[1] Revisions have been made as follows in data published for earlier months:
Lead and zinc.—January 1943 to September 1943 pay-roll indexes revised to 209.8, 209.7, 210.7, 209.5, 205.0, 206.5, 197.4, 204.0, and 212.4.
Retail automotive group.—September employment index to 62.9, pay-roll index to 86.1.
[2] Does not include well drilling or rig building.
[3] Data are not available because of the merger of Western Union and Postal Telegraph.
[4] Cash payments only; additional value of board, room, and tips, not included.
[5] Source: Interstate Commerce Commission.
[6] Not available.
[7] Based on estimates prepared by the U. S. Maritime Commission covering employment on steam and motor merchant vessels of 1,000 gross tons or over in deep-sea trade only.

AVERAGE EARNINGS AND HOURS

Average weekly earnings and hours and average hourly earnings for October, November, and December 1943, where available, are given in table 6 for both manufacturing and nonmanufacturing industries. The average weekly earnings for individual industries are computed by dividing the weekly pay rolls in the reporting establishments by the total number of full- and part-time employees reported. As not all reporting establishments supply information on man-hours, the average hours worked per week and average hourly earnings shown in that table are necessarily based on data furnished by a slightly smaller number of reporting firms. Because of variation in the size and composition of the reporting sample, the average hours per week, average hourly earnings, and average weekly earnings shown may not be strictly comparable from month to month. The sample, however, is believed to be sufficiently adequate in virtually all instances to indicate the general movement of earnings and

hours over the period shown. The average weekly hours and hourly earnings for the manufacturing groups are weighted arithmetic means of the averages for the individual industries, estimated employment being used as weights for weekly hours and estimated aggregate hours as weights for hourly earnings. The average weekly earnings for these groups are now computed by multiplying the average weekly hours by the corresponding average hourly earnings, and are not comparable with figures published in the November 1942 or earlier issues of the Monthly Labor Review. Formerly, weekly earnings for the groups were computed by dividing total weekly pay roll by total employment, without any formal weighting of figures for the component industries.

TABLE 6.—*Hours and Earnings in Manufacturing and Nonmanufacturing Industries*

MANUFACTURING

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1943	Nov. 1943	Oct. 1943
							Cents	*Cents*	*Cents*
All manufacturing	$44.68	$45.32	$44.86	44.9	45.5	45.4	99.5	99.6	98.8
Durable goods	50.50	51.67	51.28	46.2	47.1	47.2	109.3	109.7	108.6
Nondurable goods	35.61	35.73	35.18	42.8	43.1	42.7	83.2	82.9	82.4
Durable goods									
Iron and steel and their products	49.49	49.74	49.74	46.6	47.1	47.1	106.2	105.6	105.6
Blast furnaces, steel works, and rolling mills	51.51	51.74	52.88	45.3	45.5	46.3	114.6	113.9	114.2
Gray-iron and semisteel castings	49.25	49.71	49.50	47.4	48.0	48.1	104.1	103.6	103.1
Malleable-iron castings	50.38	49.29	50.04	48.7	47.9	48.3	103.4	103.0	103.6
Steel castings	50.47	50.72	49.94	46.4	47.1	46.7	108.8	107.8	106.9
Cast-iron pipe and fittings	37.84	37.40	38.40	43.8	43.4	44.6	86.3	86.6	85.9
Tin cans and other tinware	39.03	38.01	38.56	44.7	44.2	45.0	87.3	86.2	85.8
Wirework	49.31	49.77	49.58	47.6	48.3	48.6	103.3	103.1	102.2
Cutlery and edge tools	42.95	43.56	43.15	46.3	47.2	46.8	92.8	92.3	92.2
Tools (except edge tools, machine tools, files, and saws)	45.30	46.06	46.02	47.4	48.3	48.3	95.6	95.6	95.5
Hardware	43.93	44.73	45.12	47.5	48.2	48.7	92.4	92.7	92.7
Plumbers' supplies	45.70	46.40	45.97	46.8	47.8	47.6	97.6	97.1	96.3
Stoves, oil burners, and heating equipment, not elsewhere classified	45.54	45.68	45.38	46.9	47.2	47.4	97.2	96.7	95.8
Steam and hot-water heating apparatus and steam fittings	47.98	47.62	47.80	47.9	48.0	48.4	100.2	99.2	98.9
Stamped and enameled ware and galvanizing	45.85	46.50	45.73	45.7	46.8	46.2	100.2	99.3	98.9
Fabricated structural and ornamental metalwork	53.30	54.01	53.45	48.3	48.7	49.1	110.3	110.1	108.9
Metal doors, sash, frames, molding, and trim	50.40	49.90	49.75	48.4	49.4	48.8	104.1	101.1	101.9
Bolts, nuts, washers, and rivets	48.22	49.34	48.24	47.8	48.8	47.8	100.9	101.2	100.8
Forgings, iron and steel	59.00	60.13	58.60	48.8	49.2	48.8	120.9	122.3	121.5
Screw machine products and wood screws	49.46	50.02	49.68	49.4	50.1	49.9	100.6	100.0	99.5
Steel barrels, kegs, and drums	44.32	44.91	41.88	44.2	45.4	42.8	100.2	98.9	98.0
Firearms	59.64	60.18	57.92	47.7	48.7	47.4	125.1	123.6	122.3
Electrical machinery	46.02	46.63	46.44	46.2	47.1	47.1	99.6	99.0	98.6
Electrical equipment	48.63	48.89	48.75	46.7	47.4	47.4	104.2	103.3	102.9
Radios and phonographs	40.35	41.36	40.71	45.8	46.8	46.7	88.5	88.4	87.2
Communication equipment	41.98	43.15	42.75	45.0	46.4	46.1	92.1	92.4	92.3
Machinery, except electrical	53.79	54.16	53.87	48.9	49.6	49.6	110.0	109.2	108.6
Machinery and machine-shop products	52.87	53.57	52.61	48.7	49.7	49.2	108.4	107.6	106.8
Engines and turbines	59.85	59.31	60.13	49.7	50.2	50.7	121.0	118.6	119.1
Tractors	51.99	52.58	52.03	46.6	47.3	46.8	111.7	111.2	111.3
Agricultural machinery, excluding tractors	50.88	51.89	51.91	46.7	47.5	47.7	109.8	109.3	108.8
Machine tools	55.21	55.13	55.34	49.9	50.4	50.7	109.8	109.3	109.2
Machine-tool accessories [2]	57.55	58.25	57.54	50.0	50.7	50.8	115.3	114.9	113.5
Textile machinery	47.12	47.09	47.16	49.5	49.6	49.8	95.2	95.0	94.7
Typewriters	49.22	48.22	48.14	48.5	48.4	48.6	101.4	99.5	99.1
Cash registers, adding and calculating machines	60.80	61.40	62.24	50.5	51.7	52.0	121.2	119.9	120.1
Washing machines, wringers and driers, domestic	45.38	45.18	45.69	45.7	46.1	46.8	99.3	97.9	97.6

See footnotes at end of table.

TABLE 6.—*Hours and Earnings in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1943	Nov. 1943	Oct. 1943
Durable goods—Continued									
Machinery, except electrical—Continued									
Sewing machines, domestic and industrial	$57.58	$58.13	$57.90	52.3	53.3	53.4	*Cents* 110.7	*Cents* 109.7	*Cents* 108.6
Refrigerators and refrigeration equipment	50.58	50.52	50.48	47.5	47.7	47.9	106.2	105.9	105.3
Transportation equipment, except automobiles	57.71	59.98	58.47	46.5	47.6	47.5	124.1	126.0	122.1
Locomotives	66.99	61.51	63.51	50.8	49.0	50.0	131.8	125.5	126.9
Cars, electric- and steam-railroad	51.77	50.64	49.92	46.6	46.1	46.2	111.1	109.8	108.2
Aircraft and parts, excluding aircraft engines	51.52	52.33	51.74	45.9	46.8	46.8	112.3	111.9	110.6
Aircraft engines	57.47	60.64	60.68	45.3	47.4	47.6	126.8	128.0	127.5
Shipbuilding and boatbuilding	62.01	65.57	62.91	47.0	48.2	47.9	131.9	136.0	131.3
Motorcycles, bicycles, and parts	48.52	49.08	50.37	47.1	47.3	48.3	102.9	103.8	104.3
Automobiles	55.57	58.22	59.50	44.6	46.5	47.6	124.6	125.2	125.0
Nonferrous metals and their products	48.13	48.65	48.26	46.5	47.1	46.9	103.5	103.3	102.9
Smelting and refining, primary, of nonferrous metals	47.06	47.96	47.96	45.1	45.8	45.7	104.4	104.7	104.9
Alloying and rolling and drawing of nonferrous metals, except aluminum	51.85	53.53	53.46	47.0	48.3	48.2	110.3	110.9	110.8
Clocks and watches	40.86	41.66	41.28	45.8	47.0	46.4	89.1	88.7	89.1
Jewelry (precious metals) and jewelers' findings	40.28	40.10	38.79	44.7	44.5	43.7	89.4	89.1	88.0
Silverware and plated ware	47.47	46.71	45.80	47.0	47.1	46.7	100.9	99.3	98.2
Lighting equipment	45.63	46.41	45.50	45.2	45.9	45.6	101.0	101.1	99.9
Aluminum manufactures	49.86	49.52	49.41	47.0	47.1	47.2	106.2	105.2	104.7
Lumber and timber basic products	32.78	33.59	34.17	42.8	43.4	44.2	76.6	77.4	77.3
Sawmills and logging camps	31.65	32.69	33.34	42.1	42.8	43.7	75.1	76.3	76.3
Planing and plywood mills	36.26	36.41	36.87	45.0	45.4	46.0	81.0	80.6	80.3
Furniture and finished lumber products	34.69	34.63	34.73	44.3	44.4	44.7	78.3	78.0	77.7
Furniture	35.64	35.32	35.56	44.5	44.3	44.8	80.3	79.9	79.7
Caskets and other morticians' goods	37.97	37.62	37.11	45.9	45.8	45.4	83.0	82.3	81.7
Wood preserving	30.58	31.30	32.62	41.8	43.4	44.9	72.9	72.1	72.6
Stone, clay, and glass products	37.75	38.24	38.15	43.0	43.6	43.8	87.8	87.7	87.1
Glass and glassware	39.28	39.49	39.30	42.2	42.4	43.0	93.3	93.2	91.6
Glass products made from purchased glass	33.52	34.27	33.13	44.1	45.0	44.1	75.9	76.0	75.1
Cement	38.86	39.38	40.07	43.7	44.0	44.2	88.9	89.3	90.7
Brick, tile, and terra cotta	30.99	31.78	32.00	40.9	41.4	41.7	75.8	76.0	76.7
Pottery and related products	33.53	35.00	35.01	39.8	41.5	41.6	86.0	85.6	85.4
Gypsum	44.05	45.74	45.35	48.3	49.7	49.8	90.7	92.0	91.1
Lime	35.89	36.08	35.82	46.9	47.8	47.2	76.6	75.3	75.7
Marble, granite, slate, and other products [2]	38.31	38.18	38.27	43.5	42.5	43.0	88.0	89.3	88.7
Abrasives	44.32	45.89	45.30	46.0	47.4	47.1	96.3	96.8	96.1
Asbestos products	46.39	45.87	45.48	48.1	47.5	47.9	96.4	96.0	94.9
Nondurable goods									
Textile-mill products and other fiber manufactures	28.23	28.30	28.04	41.7	41.8	41.6	67.7	67.7	67.4
Cotton manufactures, except smallwares	24.78	24.77	24.57	41.7	41.8	41.5	59.4	59.3	59.1
Cotton smallwares	31.90	31.44	32.15	42.7	42.4	43.2	74.7	74.2	74.5
Silk and rayon goods	27.90	27.97	27.78	42.3	42.3	42.2	66.0	66.0	65.7
Woolen and worsted manufactures, except dyeing and finishing	34.43	34.43	34.24	41.8	41.7	41.7	82.3	82.5	82.1
Hosiery	28.26	28.28	27.99	39.3	39.3	39.2	72.0	71.9	71.3
Knitted cloth [3]	31.79	31.49	31.09	43.1	43.9	43.1	73.3	71.7	71.4
Knitted outerwear and knitted gloves	28.63	29.35	28.19	39.7	40.9	40.1	71.4	71.0	69.9
Knitted underwear	25.64	25.79	25.30	41.0	41.4	41.3	61.7	61.8	60.6
Dyeing and finishing textiles, including woolen and worsted	33.09	32.94	32.86	44.7	44.4	44.5	74.0	74.2	73.8
Carpets and rugs, wool	37.61	38.41	37.61	42.7	43.3	42.9	88.5	88.8	88.0
Hats, fur-felt	41.51	41.87	40.54	41.6	42.1	41.3	100.3	99.5	98.6
Jute goods, except felts	32.99	32.84	32.11	44.5	44.3	43.5	74.1	74.2	73.8
Cordage and twine	30.82	30.96	30.53	44.6	44.5	44.6	69.0	69.4	68.3
Apparel and other finished textile products	27.97	28.19	27.86	37.6	38.1	37.8	74.4	74.0	73.7
Men's clothing, not elsewhere classified	29.74	30.07	29.45	38.1	38.6	38.0	77.8	77.9	77.5
Shirts, collars, and nightwear	23.19	23.28	23.01	37.8	38.2	38.2	61.3	61.0	60.2

See footnotes at end of table.

TABLE 6.—*Hours and Earnings in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1943	Nov. 1943	Oct. 1943
Nondurable goods—Continued									
Apparel and other finished textile products—Continued.							*Cents*	*Cents*	*Cents*
Underwear and neckwear, men's	$24.97	$25.88	$25.44	37.4	38.4	38.0	66.7	67.4	66.9
Work shirts	18.84	19.80	19.21	37.6	39.0	38.7	49.9	51.0	49.4
Women's clothing, not elsewhere classified	33.29	32.97	32.91	36.4	36.6	36.4	89.9	88.5	89.1
Corsets and allied garments	28.22	28.99	28.43	40.0	41.2	40.7	70.8	70.5	70.0
Millinery	32.31	30.75	33.24	31.4	30.3	31.6	86.6	87.8	88.5
Handkerchiefs	21.51	22.40	22.53	37.0	38.4	38.5	58.2	58.3	58.5
Curtains, draperies, and bedspreads	23.98	24.20	23.70	38.2	39.1	39.3	62.1	61.6	59.9
Housefurnishings, other than curtains, etc	32.28	33.33	32.19	42.0	43.7	43.1	77.0	77.1	75.8
Textile bags	26.71	27.39	27.54	41.0	41.8	42.6	65.6	65.8	65.0
Leather and leather products	31.00	30.68	30.22	40.1	39.9	39.5	77.3	76.9	76.5
Leather	40.08	38.82	37.99	43.8	43.2	42.7	91.5	90.3	89.4
Boot and shoe cut stock and findings	31.00	30.57	30.70	41.1	40.6	41.3	75.4	75.3	75.2
Boots and shoes	29.19	28.87	28.33	39.3	39.0	38.5	73.9	73.6	73.3
Leather gloves and mittens	27.83	29.06	28.37	38.1	39.4	39.0	73.6	74.5	73.1
Trunks and suitcases	32.43	33.35	32.41	40.3	41.0	40.8	79.3	80.1	78.6
Food	37.95	37.72	35.94	45.5	45.5	44.1	83.4	82.9	81.5
Slaughtering and meat packing	46.61	47.08	41.94	51.3	51.6	47.3	91.3	91.8	89.0
Butter	33.03	32.37	31.96	47.0	47.0	47.1	70.8	68.7	67.8
Condensed and evaporated milk	33.83	34.25	33.72	47.5	48.3	48.4	71.2	70.9	69.7
Ice cream	36.73	36.71	36.22	45.5	45.8	45.1	77.5	76.7	76.4
Flour	41.36	40.99	40.56	49.5	49.9	49.6	83.4	82.3	81.9
Cereal preparations	43.43	43.95	44.59	46.1	46.8	46.7	94.1	93.9	95.5
Baking	36.67	36.69	36.43	44.9	45.1	45.0	81.8	81.5	81.1
Sugar refining, cane	37.88	38.02	37.41	45.9	46.8	45.0	82.5	81.2	83.0
Sugar, beet	31.89	36.30	30.86	38.9	45.8	38.0	82.1	79.2	81.1
Confectionery	28.88	28.87	28.62	41.9	42.2	41.7	69.3	68.8	69.0
Beverages, nonalcoholic	33.40	32.90	32.29	43.5	43.3	42.6	76.8	76.5	76.5
Malt liquors	48.40	48.54	48.30	44.7	45.1	45.3	108.1	108.2	107.2
Canning and preserving	29.69	28.30	28.13	39.5	38.1	38.5	75.4	74.8	73.6
Tobacco manufactures	28.29	28.60	28.54	42.1	42.5	42.6	67.2	67.3	67.0
Cigarettes	30.97	32.06	31.62	42.9	43.9	43.5	72.3	73.1	72.6
Cigars	26.29	25.87	26.01	41.7	41.4	42.0	63.1	62.4	62.2
Tobacco (chewing and smoking) and snuff	26.37	26.75	26.74	40.8	41.3	41.1	64.2	64.8	65.1
Paper and allied products	37.01	37.19	37.11	45.3	45.8	45.7	81.7	81.2	81.2
Paper and pulp	40.37	40.57	40.63	46.7	47.2	47.3	86.3	85.8	86.0
Envelopes	34.86	35.34	35.24	44.0	45.2	44.9	79.2	78.3	78.4
Paper bags	33.00	33.48	32.70	44.4	45.5	44.5	74.6	73.9	74.0
Paper boxes	33.08	33.35	33.00	43.7	44.0	43.9	75.9	75.8	75.3
Printing, publishing, and allied industries	42.00	41.55	41.33	40.5	40.5	40.2	103.7	102.6	102.8
Newspapers and periodicals	46.76	46.25	46.33	37.5	37.5	37.7	122.4	121.3	120.9
Printing, book and job	39.79	39.29	39.11	41.8	41.7	41.3	95.1	93.9	94.1
Lithographing	43.75	44.26	42.51	44.0	44.5	42.7	100.1	99.7	99.7
Chemicals and allied products	42.26	42.50	42.64	45.1	45.6	45.8	93.7	93.2	93.1
Paints, varnishes, and colors	43.80	44.40	44.17	46.2	46.9	47.0	94.7	94.9	94.3
Drugs, medicines, and insecticides	34.58	34.30	34.58	43.7	44.2	44.2	78.8	78.0	78.6
Soap	45.73	45.07	44.01	46.7	46.7	45.9	97.9	96.6	95.9
Rayon and allied products	37.07	37.76	37.22	41.8	42.7	42.2	88.6	88.4	88.2
Chemicals, not elsewhere classified	49.93	50.40	50.34	45.9	46.5	46.8	108.5	108.2	107.6
Explosives and safety fuses	46.66	47.77	46.85	45.5	46.5	46.1	103.0	102.8	101.7
Ammunition, small-arms	43.15	42.43	43.77	45.0	44.9	46.1	96.0	94.6	94.9
Fireworks	40.24	40.12	38.08	43.8	44.1	42.5	92.0	91.1	89.6
Cottonseed oil	26.29	26.20	26.00	53.1	53.8	54.4	49.5	48.5	47.7
Fertilizers	27.21	27.94	28.86	42.3	43.4	44.2	64.4	64.4	65.4
Products of petroleum and coal	53.04	52.81	52.99	46.0	46.0	46.4	115.3	114.8	114.2
Petroleum refining	56.30	56.20	56.12	46.0	46.1	46.1	122.5	122.0	121.7
Coke and byproducts	46.21	44.61	45.76	45.3	44.8	46.1	101.3	99.8	99.3
Roofing materials	44.58	46.40	46.19	48.1	49.2	49.6	92.7	94.3	93.0
Rubber products	47.82	48.72	48.08	44.9	45.7	45.4	106.5	106.6	105.9
Rubber tires and inner tubes	55.53	57.12	56.49	45.2	46.2	46.0	123.4	124.0	123.1
Rubber boots and shoes	37.95	38.94	38.39	43.6	44.9	44.3	87.1	86.8	86.6
Rubber goods, other	41.07	41.03	40.42	45.0	45.3	45.0	91.1	90.7	90.0
Miscellaneous industries	42.18	42.64	41.86	45.6	46.5	46.1	92.5	91.7	90.8
Professional and scientific instruments and fire-control equipment	54.22	54.20	52.41	50.5	51.5	51.1	107.1	105.3	102.7
Photographic apparatus	46.97	48.29	47.12	45.4	47.0	46.3	103.5	102.9	102.0
Pianos, organs, and parts	44.97	45.65	45.90	46.5	47.5	47.7	96.9	96.4	96.4

See footnotes at end of table.

TABLE 6.—*Hours and Earnings in Manufacturing and Nonmanufacturing Industries*—Continued

NONMANUFACTURING

Industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1943	Nov. 1943	Oct. 1943	Dec. 1943	Nov. 1943	Oct. 1943
Coal mining:							*Cents*	*Cents*	*Cents*
Anthracite [a]	$47.90	$28.02	$44.77	41.4	25.6	41.7	115.3	111.1	107.0
Bituminous [a]	52.85	32.55	45.08	44.6	28.6	38.8	119.8	115.0	116.5
Metal mining	44.04	44.10	45.19	44.2	44.0	45.3	99.3	99.6	99.7
Quarrying and nonmetallic mining	36.72	37.89	38.65	45.3	46.4	47.7	81.4	81.5	81.1
Crude petroleum production	51.44	51.85	50.57	44.9	44.9	44.4	112.2	112.9	112.0
Public utilities:									
Telephone and telegraph	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
Electric light and power	46.48	46.37	46.14	42.9	42.8	42.7	107.8	108.2	107.8
Street railways and busses	45.62	45.67	44.96	49.5	49.8	49.6	90.7	90.2	89.3
Wholesale trade	41.04	40.97	40.69	42.8	42.9	42.7	95.4	95.6	95.3
Retail trade	24.40	24.70	24.93	39.4	39.6	39.9	66.5	68.6	68.8
Food	29.49	29.20	29.14	40.3	40.2	40.3	67.0	68.0	67.9
General merchandise	19.54	20.17	20.42	35.5	35.3	35.9	53.8	55.9	56.3
Apparel	26.54	26.37	26.39	36.2	36.4	36.5	74.4	73.5	72.8
Furniture and housefurnishings	36.18	35.75	35.44	43.7	43.6	43.6	88.1	85.8	84.2
Automotive [2]	38.19	38.34	38.38	47.6	47.6	47.6	79.8	81.4	81.5
Lumber and building materials	35.43	35.57	36.53	42.8	43.0	43.9	84.8	84.6	84.0
Hotels (year-round) [b]	21.36	21.37	21.12	44.7	44.8	44.7	48.2	47.4	47.3
Power laundries	25.67	25.51	25.12	44.1	44.0	44.0	58.3	58.4	57.6
Dyeing and cleaning	28.90	28.98	29.36	43.3	43.5	44.1	68.5	68.9	67.6
Brokerage	50.87	50.64	50.65	[d]	[d]	[d]	[d]	[d]	[d]
Insurance	44.45	43.60	43.16	[d]	[d]	[d]	[d]	[d]	[d]
Building construction	49.38	50.59	50.54	38.1	39.2	39.7	129.5	129.2	127.3

[a] There were scattered strikes in November 1943.

[1] These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked during any part of one pay period ending nearest the 15th of the month. As not all reporting firms furnish man-hour data, average hours and average hourly earnings for individual industries are based on a smaller sample than are weekly earnings. Data for the current and immediately preceding months are subject to revision.

[2] Comparable data for earlier months back to January 1939, available upon request.

[3] Revisions have been made as follows in the data published for earlier months:

Marble, granite, slate, and other products.—July, August, and September 1943, average weekly earnings to $35.19, $37.14, and $36.45; average hourly earnings to 84.3, 85.7, and 87.4 cents; August and September 1943 average weekly hours to 43.2 and 41.8 hours.

Knitted cloth—September 1942 to September 1943 average weekly earnings to $25.30, $26.93, $27.66, $29.01, $29.18, $28.98, $29.44, $29.76, $30.26, $30.06, $29.11, $30.69, and $30.35; average hourly earnings to 64.0, 64.1, 64.9, 65.6, 66.8, 66.6, 67.7, 68.2, 68.9, 69.0, 68.8, 70.1, and 70.9 cents; February 1943 average weekly hours to 43.1. Revised data are comparable with the corresponding averages previously published for August 1942 and earlier months.

Retail automotive group.—September 1943 average weekly hours to 47.3, average hourly earnings to 80.4 cents.

[d] Data not available because of merger of Western Union and Postal Telegraph.

[a] Cash payments only; additional value of board, room, and tips not included.

[b] Not available.

Civilian Labor Force, January 1944

THE civilian labor force declined by 400,000 persons between December 1943 and January 1944, to a total of 51,500,000, according to the Bureau of the Census Monthly Report on the Labor Force. This decline, largely a result of seasonal decreases in trade and agriculture, was considerably smaller than the seasonal declines in previous years. Employment decreased by 600,000, while unemployment increased by 200,000 to a total of 1,100,000. No significance can be attached to this increase in the number of unemployed persons, because similar increases have occurred in two of the last three December–January intervals.

The level of the civilian labor force in January 1944 was 1,900,000 lower than that of January 1943. A decline of 2,300,000 male workers, reflecting the withdrawal of men into the armed forces, has been partially offset by an increase of 400,000 women in the labor force.

Estimated Civilian Labor Force, by Employment Status and by Sex,[1] December 1941 to January 1944

[Source: U. S. Department of Commerce, Bureau of the Census]

Month	Estimated number (millions of persons)[2]								
	Labor force			Employed			Unemployed [3]		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1941									
December	54.9	40.3	14.6	51.0	37.6	13.4	3.9	2.7	1.2
1942									
January	54.2	40.1	14.1	49.7	37.0	12.7	4.5	3.1	1.4
February	54.4	40.2	14.2	50.2	37.3	12.9	4.2	2.9	1.3
March	54.6	40.1	14.5	50.9	37.6	13.3	3.7	2.5	1.2
April	54.6	39.9	14.7	51.4	37.8	13.6	3.2	2.1	1.1
May	55.0	40.0	15.0	52.3	38.4	13.9	2.7	1.6	1.1
June	56.7	41.0	15.7	53.7	39.2	14.5	3.0	1.8	1.2
July	57.3	41.5	15.8	54.5	39.8	14.7	2.8	1.7	1.1
August	57.2	41.0	16.2	54.8	39.5	15.3	2.4	1.5	.9
September	55.6	39.2	16.4	53.7	38.1	15.6	1.9	1.1	.8
October	56.0	39.1	16.9	54.2	38.0	16.2	1.8	1.1	.7
November	55.3	38.5	16.8	53.5	37.4	16.1	1.8	1.1	.7
December	54.7	37.8	16.9	53.1	36.9	16.2	1.6	.9	.7
1943									
January	53.4	37.0	16.4	51.8	36.1	15.7	1.6	.9	.7
February	53.2	36.6	16.6	51.7	35.7	16.0	1.5	.9	.6
March	52.9	36.2	16.7	51.7	35.5	16.2	1.2	.7	.5
April	52.9	36.1	16.8	51.8	35.5	16.3	1.1	.6	.5
May	53.7	36.4	17.3	52.6	35.8	16.8	1.1	.6	.5
June	55.2	37.0	18.2	53.9	36.3	17.6	1.3	.7	.6
July	56.0	37.5	18.5	54.6	36.7	17.9	1.4	.8	.6
August	55.4	37.1	18.3	54.2	36.5	17.7	1.2	.6	.6
September	53.8	35.7	18.1	52.8	35.2	17.6	1.0	.5	.5
October	53.0	35.3	17.7	52.1	34.8	17.3	.9	.5	.4
November	52.6	35.1	17.5	51.7	34.6	17.1	.9	.5	.4
December	51.9	34.8	17.1	51.0	34.2	16.8	.9	.6	.3
1944									
January	51.5	34.7	16.8	50.4	34.0	16.4	1.1	.7	.4

[1] Data for November, December, and January 1943 have been collected under a new sampling plan designed to take account of population shifts during the war. The figures for October 1943 and earlier months are the result of preliminary adjustments of the old series to bring it as closely as possible into line with the new.

[2] All data exclude persons in institutions.

[3] Persons on public emergency works projects are included with the unemployed prior to July 1, 1943.

Recent Publications of Labor Interest

March 1944

Agriculture and Agricultural Labor

The farm bloc. By Wesley McCune. Garden City, N. Y., Doubleday, Doran & Co., Inc., 1943. 278 pp. $2.

Explains what the so-called "farm bloc" is, the conditions that led to its formation, and the various "fronts" on which it moves, and describes some of the farm organizations and their leaders (National Grange, American Farm Bureau Federation, and National Farmers' Union). The cooperative associations connected with these various organizations are also touched upon.

Rehabilitation of low-income farmers. A list of references compiled by John M. McNeill. Washington, U. S. Department of Agriculture, Library, August 1943. 56 pp.; mimeographed. (Library list No. 6.)

Stabilization of farm wages. By William T. Ham. (In Agricultural Situation, U. S. Department of Agriculture, Bureau of Agricultural Economics, Washington, January 1944, pp. 18–21. 5 cents.)

Account of the distinctive problems in applying the wage-stabilization program to farm wages, with a discussion of administrative procedures.

Wartime wages, income, and manpower in farming. Washington, U. S. Bureau of Labor Statistics, 1944. 10 pp. (Serial No. R. 1610; reprinted from Monthly Labor Review, January 1944.) Free.

Wartime changes in employer-employee relations in agriculture. By Edgar C. McVoy. (In Rural Sociology, Raleigh, N. C., December 1943, pp. 356–363. 75 cents.)

It is said that the status and bargaining position of farm labor have improved during the war, but that the changes have resulted from the supply-demand situation rather than from any fundamental change in control. The author believes that farm labor will not make permanent and significant gains until it is organized into a powerful collective-bargaining group.

Agriculture in Costa Rica. By Jane Swift Powell. Washington, Pan American Union, Division of Agricultural Cooperation, 1943. 51 pp., illus.

Includes sections on rural housing, health and diet of the agricultural population, wages and hours of agricultural labor, legislation protecting agricultural labor, land tenure, and agricultural credit cooperatives.

Child Labor and Child Welfare

Annual report of the Child Welfare Information Center, League of Nations, on child welfare (summarizing information received from governments in 1942). Geneva, 1943. 119 pp. $1.

Data are presented for 16 countries on child-welfare measures adopted or being considered, and on the practical application of such measures by the State, local governments, and private organizations.

Five years of Federal control of child labor. By Beatrice McConnell. (In The Child, U. S. Children's Bureau, Washington, December 1943, pp. 83–92. Reprints of the article are available free.)

EDITOR'S NOTE.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

Proceedings of meeting held May 14–15, 1943, by subcommittee on young workers in wartime agriculture of the general advisory committee [of the U. S. Children's Bureau] on protection of young workers. Washington, U. S. Department of Labor, Children's Bureau, 1943. 79 pp.; mimeographed. Free.

The employment of minors in New York State. By Warren C. Tucker. Utica, N. Y., Utica Mutual Insurance Co., 1943. Various paging.
Contains suggested rules for the guidance of employers, New York statutes, and Federal regulations with respect to the employment of minors.

The work and welfare of children of agricultural laborers in Hidalgo County, Tex. By Amber Arthun Warburton, Helen Wood, Marian M. Crane. Washington, U. S. Children's Bureau, 1943. 74 pp. (Publication No. 298.) 15 cents, Superintendent of Documents, Washington.

Child-labor legislation under a war program in Great Britain, Germany, and Russia. Washington, U. S. War Manpower Commission, Labor Market Planning Division, 1943. 8 pp.: mimeographed.

Economic and Social Problems

Present savings and post-war markets. By Sumner H. Slichter. New York and London, McGraw-Hill Book Co., 1943. 73 pp. $1.
Describes the sources and extent of the liquid assets that have accumulated during the war and makes estimates for the years 1944 to 1946. There is also a discussion of the relationships of savings to price changes and possible inflation after the war and to the reconversion of industry and post-war employment.

Regional shifts in population, production, and markets, 1939–43. By K. C. Stokes. Washington, U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, 1943. 66 pp., charts. (Economic series No. 30.)
A study designed to indicate broadly the geographical changes in economic life during the war period. The report includes data by States or geographic divisions or by both on such subjects as population and employment, number of business firms, income payments, bank debits, consumer buying, electric-energy consumption, and wartime output.

Where's the money coming from? Problems of post-war finance. By Stuart Chase. New York, Twentieth Century Fund, 1943. 179 pp. $1. (Volume No. 3 in a series on "When the war ends.")
The author discusses the relation between finance and the basic economic activities of producing and consuming. He expresses agreement with the view that finance is merely a means to an end, the end being the distribution of the Nation's income for securing maximum output and for insuring a minimum of necessities for every individual and family. The view is advanced that it will be possible after the war to maintain full employment by means of a "compensatory economy," businessmen largely owning and operating the means of production and the Government underwriting full employment by its control of financial machinery.

Economic problems of the Caribbean area. New York, Latin American Economic Institute, 1943. 60 pp. 75 cents. (Pamphlet series, No. 7.)
Abstracts of papers discussing impact of the war and complete texts of papers on post-war problems, presented at a conference on the area's economic position held in New York City on May 1, 1943.

How Nazi Germany has controlled business. By Ludwig Hamburger. Washington 6, Brookings Institution, 1943. 101 pp. $1.
Interpretation of Nazi Germany's regimentation of economic life by various methods of control such as nationalization, commandeering, and regulation. A chapter is devoted to the policies and machinery developed for control of the labor supply.

Seven reports on Italian economic post-war problems. New York, International Research Service, 1943. 48 pp.; mimeographed.

Health and Industrial Hygiene

Health and safety for best utilization of manpower. (In Factory Management and Maintenance, New York, January 1944, pp. 97–120; illus. 35 cents.)
Describes the safety, health, and recreation measures in a number of plants producing war materials.

Health education on the industrial front. New York, Columbia University Press, 1943. 63 pp. $1.25.
Contains addresses on different aspects of industrial health, given at the 1942 Health Education Conference of the New York Academy of Medicine.

Bibliography and survey on lead poisoning, with particular reference to packaging. By Florence A. Brous. [New York], Packaging Institute, 1943. 350 pp. $125.

Some industrial hygiene problems in the synthetic rubber industry. By Floyd A. Van Atta and Alfred M. Noyes. (In Rubber Age, New York, October 1943, pp. 35–39. 50 cents.)
Points out some of the facts concerning the properties of materials used in the production of synthetic rubber, hazards in the different processes, and methods of control.

A medicina do trabalho na indústria siderúrgica, [Brazil]. By Hugo Firmeza. (In Boletim do Ministério do Trabalho, Indústria e Comércio, Rio de Janeiro, April 1943, pp. 261–275.)
Discusses health and safety conditions in the metallurgical industry in Brazil and outlines a scheme for the organization of an industrial-medical service in a large metallurgical establishment.

Housing

Abstracts of selected material on post-war housing and urban development, Group IV. Washington, U. S. National Housing Agency, Division of Urban Studies, January 1944. 48 pp.; mimeographed.
Covers housing in the United States and other countries.

Post-war housing. By Harold Kellock. Washington, Editorial Research Reports (1013 Thirteenth Street NW.), 1943. 13 pp. (Vol. II, 1943, No. 14.) $1.
Devoted to housing needs, the future of public housing, and other post-war housing problems.

War housing and city planning—today and afterwards. San Francisco, Commonwealth Club of California, November 29, 1943. 46 pp., illus. (The Commonwealth, Vol. XIX, No. 48, part 2.)

Annual report of the National Capital Housing Authority, for the fiscal year ended June 30, 1943. Washington, [1943]. Various paging, map; mimeographed.
Shows the effects of the public-housing program on wartime housing conditions in Washington, and gives figures on construction costs and rentals charged.

Annual report of the New Jersey State Housing Authority [for the year 1943]. Trenton, [1943]. 44 pp., illus.

Housing abroad up to World War II, supplemented by comparisons with conditions in the United States. Prepared by Stella K. Margold for Department of Architecture, Massachusetts Institute of Technology. Cambridge, Mass., 1942. 314 pp.; mimeographed. $2.
The foreign material is presented under three main topics—acquisition of land, standards of occupancy and construction, and reduction in basic building costs.

Industrial Accidents

Industrial injuries in the United States during 1942. Washington, U. S. Bureau of Labor Statistics, 1943. 26 pp., charts. (Bull. No. 758; reprinted from Monthly Labor Review, November 1943, with additional data.) 10 cents, Superintendent of Documents, Washington.

Accident rates in the chemical industry, 1942. Chicago 6, Ill., National Safety Council, Inc., 1943. 14 pp., charts.
This summary of the accident experience of 475 chemical plants shows, for all plants combined, a frequency rate of 9.90 disabling injuries per million man-hours worked and a severity rate of 1.29 days of disability per 1,000 hours worked.

Accident experience of the gas industry for 1942. New York, American Gas Association, 1943. 18 pp. (Statistical bull. No. 51.)

Proceedings of fourteenth All Ohio Safety Congress, Columbus, Ohio, April 20–22, 1943. Columbus, Industrial Commission of Ohio, Division of Safety and Hygiene, 1943. 559 pp.

Industrial Relations

Federal control of collective bargaining. By Morton Steinberg. (In Illinois Law Review, Chicago, Ill., November–December 1943, pp. 128–166.)
The writer discusses the efforts of the National War Labor Board to stabilize wages and salaries and to give a measure of protection to organized labor. He concludes that the board has affected the basic pattern of labor-management relations with the result that at present entirely "free" collective bargaining as to wages and salaries has been "placed on the shelf for the duration."

National War Labor Board rules of organization and procedure. Washington, U. S. National War Labor Board, Division of Public Information, 1943. 15 pp. Free.

Labor and management in a democracy. (In Public Opinion Quarterly, Princeton, N. J., fall 1943, pp. 354–456. $1.25.)
Symposium by 10 writers presenting points of view of labor, management, and the public. There are discussions of basic ideas or principles, accounts of the practices adopted (for example, the work of the labor-management committees promoted by the War Production Board), descriptions of certain outstanding cases of cooperation (for example, in the merchant marine), and summaries of views of workers regarding their place in the war economy and the causes of labor unrest.

Union agreements in the aluminum-fabrication industry. Washington, U. S. Bureau of Labor Statistics, 1944. 20 pp. (Bull. No. 760; reprinted from Monthly Labor Review, December 1943.) 10 cents, Superintendent of Documents, Washington.

Estado de derecho o huelga, [México]. By Carlos Roel. Mexico, D. F., Editorial Stylo, 1942. 90 pp.
Treatise on the claim that there is legal basis for the "right of strike" in Mexico, discussing its alleged foundation in the Constitution of 1917 and in the Federal Labor Law of 1931. The right to strike, according to this author, was not a victory won by the workers, nor has the use of the strike been an advantage to them. He believes compulsory arbitration to be the legal procedure for settlement of labor disputes.

Industry Reports

Ordnance workers in 1918 and 1943. Washington, U. S. Bureau of Labor Statistics, 1943. 8 pp. (Serial No. R. 1605; reprinted from Monthly Labor Review, December 1943.) Free.

"Featherbed rules," railroad manpower, and the T. P. & W. By Joseph B. Eastman. Washington, U. S. Office of Defense Transportation, 1943. 11 pp.
Statement based on testimony before the House Military Affairs Committee, May 7, 1943, discussing the rules affecting employment or working conditions, commonly described as "featherbed rules," in relation to the manpower problem in railroad transportation. The writer describes the working rules, the "thirteen-point agreement" for relaxations of the rules during the war, and the particular situation on the Toledo, Peoria & Western Railroad under Federal operation.

Transportation labor problems in wartime and after. By Otto S. Beyer and Edwin M. Fitch. (In Annals of the American Academy of Political and Social Science, Vol. 230, Philadelphia, November 1943, pp. 191–201. $2.)
One of a group of articles brought together under the general title of "Transportation: War and post-war." Some of the topics discussed in this article are the change from a labor surplus to a labor shortage, labor attitudes toward war measures, the problem of wartime wage adjustments, and the applicability of the principles of the Railway Labor Act to transportation labor other than workers employed by the railroads and the airlines.

Labor and Social Legislation

Résumé of the proceedings of the tenth National Conference on Labor Legislation, Kansas City, Mo., December 8–9, 1943. Washington, U. S. Department of Labor, Division of Labor Standards, 1943. 22 pp. (Bull. No. 65.) Free.

Labor code, State of California. Sacramento, Bureau of Printing, Documents Division, 1943. 210 pp. 75 cents, plus tax.

La legislación social Argentina. (In Informaciones Argentinas, Ministerio de Relaciones Exteriores y Culto, Buenos Aires, July 15, 1943, pp. 37, 38.)
Account of the development of labor and social legislation in Argentina from its beginning as an independent nation through the year 1940. Some statistics of unemployment and of worker organizations are included.

Jurisdição e competência da justiça do trabalho. By Arnaldo Sussekind. (In Iapetc, Rio de Janeiro, October 1942, pp. 8, 9.)
Deals with the jurisdiction and authority of labor courts in Brazil, including quotations and analyses of various legal provisions through June 11, 1942.

Labor legislation in Canada, 1941–42. Ottawa, Department of Labor, 1943. 259 pp.
Presents either the text or a summary of each of the Dominion and provincial laws of interest to labor.

The Soviet constitution: An introduction. By John N. Hazard. (In Lawyers Guild Review, Washington, November-December 1943, pp. 27–42. 50 cents.)
Reviews the constitutional history of the Soviet Union and particularly developments leading to the adoption of the present constitution in 1936.

Labor Organizations and Congresses

Maintenance of union membership: A study of official cases and company experience. By Bryce M. Stewart and Walter J. Couper. New York, Industrial Relations Counselors, Inc., 1943. 83 pp. (Industrial relations monograph No. 8.) $1.25.
This study was undertaken with the sponsorship of the employer members of the National War Labor Board, to learn, among other things, "the attitudes and policies of employers and unions regarding this form of union security." It arrives at the following conclusion: "If unions are not to become wards of the State they will do well to rally to the cause of free trade unionism now. Employers on their part should accept the right of employees to organize granted by the Wagner Act, not only in the letter but also in the spirit. . . . This conclusion is borne out by the experience in Great Britain and Sweden where most employers ceased to oppose the organization of workers years ago."

Labor in Argentina. By Juan Antonio Solari. (In American Federationist, American Federation of Labor, Washington, January 1944, pp. 8–10, 29. 20 cents.)
Historical account of the labor movement in Argentina dealing especially with its trade-union and politico-social aspects. Gives statistics for various years on total salaries and wages, union membership, strikes, and number of establishments and of workers, and discusses labor legislation and present status of unionism.

O imposto sindical e as associações profissionais, [Brazil]. By Helvecio Xavier Lopes. (In Revista do Trabalho, Rio de Janeiro, July 1943, pp. 12–16.)
Discussion of compulsory payment of workers' and employers' dues to their respective legally recognized sindical organizations in Brazil, covering amounts of the contributions, authorized uses of the funds, administration, etc.

Report of the proceedings of the fifty-ninth annual convention of the Trades and Labor Congress of Canada, held at the City of Quebec, August 23–27, 1943. Ottawa, Trades and Labor Congress of Canada, [1943?]. 371 pp.

Report of twentieth session of All India Trade Union Congress, Nagpur, 1943. Bombay 4, General Secretary, All India Trade Union Congress, 1943. 82 pp. 2 rupees.
In addition to the various resolutions introduced at this meeting which reflect trade-union attitudes on many problems, the report contains considerable information on labor organizations and labor conditions in India.

Manpower

Manpower in wartime—present estimates, fullest use, future requirements. New York 20, National Association of Manufacturers, Research Department, 1943. 28 pp., charts; mimeographed.

Manpower requirements in 1944. Washington, U. S. Bureau of Labor Statistics, 1943. 5 pp. (Serial No. R. 1598; reprinted from Monthly Labor Review, December 1943.) Free.

Methods for solving manpower problems. By Lawrence A. Appley and others. New York, American Management Association, 1943. 35 pp. Personnel series No. 71.

Mobilizing manpower. By James E. Pate. (In Social Forces, Chapel Hill, N. C., December 1943, pp. 154–162. $1.00.)
Summary of manpower problems and the work of public agencies in attempting to solve these problems, with references to the sources used.

Public service recruitment in Australia. By Robert S. Parker. Melbourne, Melbourne University Press (for Australian Council for Educational Research), 1942. 296 pp. 10s. (Stechert, New York, $2.50).
Traces the development of present-day principles of recruitment for public service, beginning with legislation enacted about 50 years ago.

Personnel Management

The employee counselor in industry. New York, Metropolitan Life Insurance Co., Policyholders Service Bureau, [1943]. 24 pp., illus.
Outlines qualifications and duties of counselors, both male and female, and describes how they are being used in specified plants.

Handling personality adjustment in industry. By Robert N. McMurry. New York, Harper & Bros., 1944. 297 pp. $3.
An attempt to analyze and to work out practical techniques for dealing with some of the more pressing problems of personnel administration and industrial relations, in the light of recent findings of psychology and psychiatry.

How to correct workers: A working guide for department heads, supervisors and foremen. By Glenn Gardiner. New York, Elliott Service Co., 1943. 23 pp.

Personnel practices in factory and office, II. New York, National Industrial Conference Board, Inc., 1943. 48 pp. (Studies in personnel policy, No. 59.)
The study covered the personnel practices in 1,066 industrial and 1,213 nonindustrial companies. The tabulations show hours of work and attendance, employment and pay-roll procedures, leaves of absence, lay-off and discharge policies, and plant privileges.

Wartime personnel administration in the Tennessee Valley Authority: Report of the personnel department for the year ending June 30, 1943. Knoxville, Tennessee Valley Authority, [1943?]. 41 pp.; mimeographed.
The Tennessee Valley Authority maintained a staff in the fiscal year 1942–43 which reached a peak of around 40,000 employees but declined to approximately 28,000. The report includes a discussion of employee-management relations under the general agreement between the TVA and labor organizations. Six bargaining units are recognized and a central joint cooperative committee and local cooperative committees are described as having become increasingly active. Various special problems of wartime personnel administration are outlined. Documentary and statistical materials are presented in appendixes.

War factory. A report by Mass-Observation. London, Victor Gollancz, Ltd., 1943. 127 pp. 4s.6d.
Deals with life inside and outside the war factory in England and draws conclusions as to how wasted time, boredom, and other problems of workers who are working long hours and are removed from their regular environment may be dealt with.

Post-War Reconstruction

International Postwar Problems, Volume 1, No. 1. New York 17, American Labor Conference on International Affairs (9 East 46th Street), December 1943. 156 pp. $1 a copy, $3 a year.
This first number of a new quarterly periodical includes the following articles: American labor in world affairs, by William Green; The post-war re-employment problem, by Alvin H. Hansen; The problem of full employment, by Albert Halasi; International cooperation in achieving social security, by Arthur J. Altmeyer; and Labor's international rights, by Alfred Braunthal. In addition, there is a section devoted to surveys and comments.

Post-war economic policy and planning. Report of Hon. Joseph C. O'Mahoney, United States Senator from Wyoming, to the Special (Senate) Committee on Post-war Economic Policy and Planning. Washington, U. S. Government Printing Office, 1943. 144 pp. (Senate document No. 106, 78th Cong., 1st sess.).

Contains a summary of recommendations; a report on the work of important Government and private agencies dealing with post-war problems; a brief analysis of problems likely to arise during the post-war period; a report on approaches to the problem of attaining full employment in the post-war period; an index of abstracts of material on post-war problems, prepared by the Legislative Reference Service of the Library of Congress; and a number of statistical and documentary exhibits.

Problems of contract termination. Washington, U. S. Government Printing Office, 1944. 148 pp. (Senate Committee on Military Affairs, Committee print, 78th Cong., 1st sess.)

Reproduces reports prepared by the U. S. Bureau of Labor Statistics on cancellation of war contracts—plans and practice, 1918–19; settlement of claims arising under canceled war contracts, 1918–26; and evolution of ordnance contracts, 1917–18. These reports were presented to the Subcommittee on War Contract Termination of the Senate Committee on Military Affairs, in response to the subcommittee's request for a report on cancellation of war contracts after the first World War.

Public works program after World War I. By E. Jay Howenstine, Jr. (In Journal of Political Economy, Chicago, Ill., December 1943, pp. 523–537. $1.)

It is stated that one of the most popular remedies proposed for bridging the transition period of unemployment after the war was a program of public works. No extensive program was actually carried out, however, and the results of the repeated efforts by the Federal Government to stimulate public and private construction "were pitifully small." The failure is attributed to inadequate action by the Federal Government in the field of its own buying policies, the failure to overcome the high cost of construction, and the lack of adequate machinery for making and marketing real-estate loans.

Role of the iron and steel industry in the immediate post-armistice period, November 1918–May 1919, and impact of the industry's policies upon labor. By Joan Stauffer Crane. Washington, U. S. Bureau of Labor Statistics, Employment and Occupational Outlook Branch, Post-War Division, 1943. 63 pp.; mimeographed. Free.

The transition from war to peace. By A. C. Pigou. London, Oxford University Press, 1943. 31 pp. (Oxford pamphlets on home affairs, No. H.3.) 6d.

Study of national problems that will have to be dealt with in connection with the transfer from wartime to peacetime employment. The author foresees a large post-war demand for labor followed by a period of delayed depression.

Canada after the war: Studies in political, social, and economic policies for post-war Canada. Edited by Alexander Brady and F. R. Scott. Toronto, Macmillan Co. of Canada, 1943. 342 pp., bibliography.

Independent views on post-war policies are expressed by a number of persons. Among the subjects dealt with are reconstruction of the social services, full employment, and a long-term policy for industry.

Production and Productivity of Labor

Music in industry. By Forrest H. Kirkpatrick. (In Personnel, New York, September 1943, pp. 88–94. 50 cents.)

Reviews the findings of the more important studies made in the United States and in England of the influence on production of the use of music in industry, and outlines conclusions that may be drawn from them.

Productivity in the alumina and aluminum industries, 1941–43. Washington, U. S. Bureau of Labor Statistics, 1943. 4 pp.; mimeographed. Free.

Recent productivity changes in lead and zinc mining. Washington, U. S. Bureau of Labor Statistics, 1944. 7 pp. (Serial No. R. 1606; reprinted from Monthly Labor Review, December 1943.) Free.

Wartime labor productivity in railroad transportation. Washington, U. S. Bureau of Labor Statistics, 1943. 8 pp. (Serial No. R. 1569; reprinted from Monthly Labor Review, September 1943.) Free.

Technology and livelihood: An inquiry into the changing technological basis for production as affecting employment and living standards. By Mary L. Fledderus and Mary van Kleeck. New York, Russell Sage Foundation, 1944. 237 pp. $1.25.

The author emphasizes the view that the socially desirable utilization of productive capacity requires the progressive improvement of standards of living as advances in technology are made. The organized utilization of productive resources for human life must become, it is stated, a major task in every community, from village to nation and world.

Wages, Salaries, and Hours of Labor

Statistics for wage stabilization. By Robert J. Myers and Harry Ober. (In Journal of the American Statistical Association, Washington (Editorial office, 1603 K Street NW.), December 1943, pp 425–437. $1.50.)

Discussion of the work of the Bureau of Labor Statistics in the field of occupational wage-rate data as developed for meeting official requirements in the administration of the wage-stabilization program. The essential features of occupational wage statistics are described and the work of the Bureau in its Occupational Wage Rate Project is outlined. There is also some discussion of the possible value of information of this type in meeting post-war needs in the general field of wage statistics, wage negotiations, and the administration of wage policies.

Wartime rules on premium wage rates—a guide to Executive Order No. 9240. Washington, Bureau of National Affairs, Inc., 1943. 48 pp. (BNA handbook No. 2.)

Wage rates in power laundries, spring of 1943. Washington, U. S. Bureau of Labor Statistics, 1944. 6 pp. (Serial No. R. 1608; reprinted from Monthly Labor Review, January 1944.) Free.

An analysis of municipal salaries and wages. Concord, N. H., City Planning Board, October 12, 1943. 34 pp.; mimeographed.

Data are given by occupation for each of 22 cities and towns in New England.

Salary rates of officials in 177 Oregon cities. Eugene, Oreg., Bureau of Municipal Research and Service, University of Oregon, 1943. 27 pp.; mimeographed. (Information bull. No. 53.)

Salaries and qualifications of child welfare workers in 1941. By Ralph G. Hurlin. New York, Russell Sage Foundation, 1943. 27 pp. 25 cents.

Teachers' salaries and the public welfare. Washington 6, National Education Association of the United States, Research Division, 1943. 29 pp. (Research bull., Vol. XXI, No. 4.) 25 cents.

Emphasizes that teachers' salaries are too low and should be raised. Data on salaries of teachers in 1942–43, taken from a report of the National Education Association, were published in the Monthly Labor Review for June 1943 (p. 1198).

Women in Industry

Guide to the immediate and maximum utilization of civilian womanpower. Washington, U. S. War Department, Army Service Forces Headquarters, Industrial Personnel Division, 1943. 21 pp. (Civilian personnel information bull. No. 3.)

Supervision of women on production jobs: A study of management's problems and practices in handling female personnel. New York, American Management Association, 1943. 31 pp. (Special research report No. 2.)

Wartime status of State hour laws for women. Washington, U. S. Department of Labor, Women's Bureau, January 1944. 4 pp.; mimeographed. Free.

The woman counselor in war industries—an effective system. Washington, U. S. Department of Labor, Women's Bureau, 1943. 16 pp., bibliography. Free.

Women in industry: A review of wartime loss prevention information for industrial executives. Boston, Liberty Mutual Insurance Co., Loss Prevention Department, 1943. 20 pp., bibliography.

Report of Conference on War and Post-War Work for Women, [London], January 4–8, 1943. London, Women's Employment Federation, [1943]. 24 pp.

Women in engineering. London, Ministry of Labor and National Service, [1943?]. Looseleaf.

Collection of photographs of work being done by women in the engineering industry in Great Britain, arranged in eight major groups, each preceded by a text statement regarding the operations illustrated.

General Reports

Sixth annual report of the United States High Commissioner to the Philippine Islands, covering the fiscal year July 1, 1941, to June 30, 1942. Washington, Government Printing Office, 1943. 228 pp.

Covers general economic and social conditions prior to the outbreak of war as well as conditions during the Japanese attack and after the fall of the Islands.

The basis of trusteeship in African native policy. By J. C. Smuts. Johannesburg, South African Institute of Race Relations, [1942]. 20 pp. (New Africa pamphlet No. 2.) 1s.

Investigaciones sociales, [Argentina], 1942. Buenos Aires, Ministerio del Interior, Departamento Nacional del Trabajo, 1943. 120 pp., charts. (Series A, Sintesis anual, No. 7.)

Report of statistical studies for the Argentine Republic, including, for 1942 and some earlier years, cost-of-living indexes; prices of food and other articles of prime necessity; and data on wages and hours of labor, strikes, industrial accidents (1940), and labor organizations.

The Caribbean islands and the war: A record of progress in facing stern realities. Washington, U. S. Department of State, 1943. 85 pp., bibliography, charts, maps. (Publication No. 2023.) 25 cents, Superintendent of Documents, Washington.

Survey, by the United States section of the Anglo-American Caribbean Commission, of nonmilitary adjustments in civilian activities, government controls, and interrelations among the countries of the Caribbean area, made necessary by the war. Food production, price control, cost of living, unemployment, wages, and economic progress are among the subjects treated. Statistics of wages in the British West Indies are given, by locality, in an appendix. It is believed, the report states, that "in spite of their limitations, they give a fairly accurate impression of the effect of the war on wage rates in the Caribbean."

Labor conditions in fascist Italy. Washington, U. S. Bureau of Labor Statistics, 1943. 21 pp. (Serial No. R. 1591; reprinted from Monthly Labor Review, November 1943.) Free.

Labor conditions in Rumania. Washington, U. S. Bureau of Labor Statistics, 1944. 13 pp. (Serial No. R. 1601; reprinted from Monthly Labor Review, December 1943.) Free.

Sweden—a wartime survey. Edited and published in Sweden with the assistance of public authorities. New York, American-Swedish News Exchange, Inc., [1943]. 250 pp., illus.

Chapters are devoted to consumers' cooperatives, the labor market, and trade unions in wartime.

Labor conditions in Yugoslavia. Washington, U. S. Bureau of Labor Statistics, 1943. 17 pp. (Serial No. R. 1592; reprinted from Monthly Labor Review, November 1943.) Free.

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